

A
MODERN SYSTEM
O F
NATURAL HISTORY.

CONTAINING
Accurate Descriptions, and faithful Histories,
O F
ANIMALS, VEGETABLES, and MINERALS.

Together with
Their Properties, and various Uses in MEDICINE,
MECHANICS, MANUFACTURES, &c.

Illustrated

With a great Variety of COPPER-PLATES, accurately
drawn from Nature, and beautifully engraved.

By the Rev. S A M U E L W A R D,
Vicar of Cotterstock, cum Glapthorne, Northamp-
tonshire; and others.

V O L. V.

*The great Creator did not bestow so much Curiosity and
Workmanship upon bi. Creatures to be looked upon with a
careless incurious Eye.*

Derham's Phys. Theol. Book x.

L O N D O N :

Printed for F. NEWBERY, the Corner of St. Paul's.
Church-yard, Ludgate-street. 1775.



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NATURAL HISTORY

OF

BIRD S;

OR,

A COMPETE SYSTEM

OF

ORNITHOLOGY.

ILLUSTRATED

With a great Variety of COPPER-PLATES,
accurately drawn from Nature, and elegantly engraved.

By the Rev. SAMUEL WARD,

Vicar of Cotterstock, cum Glapthorne,
Northamptonshire.

VOL. I.

LONDON:

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THE
NATURAL HISTORY
OF
BIRDS;
OR,
A COMPLETE SYSTEM
OF
ORNITHOLOGY.

Of BIRDS in GENERAL

EVERY part of nature appears furnished with inhabitants. The forests, the waters, and the depths of the earth have their respective tenants; while the yielding air, and those tracts of seeming space, too elevated for man to soar to, are traversed by multitudes of the most beautiful beings of the creation. Though every rank of animals seems calculated for its destined situation, yet none are more apparently

so than birds: they share the vegetable spoils of the earth, in common with the quadrupeds, and, to compensate for their want of strength, are supplied with swiftness: to avoid that power which they cannot oppose, they are endowed with the faculty of ascending into the air. In the scale of nature, it must be admitted that birds fall below quadrupeds, and are less imitative of human endowments; yet they certainly are the next in rank, and greatly surpass fishes and insects, not only in the structure of their bodies but in their sagacity.

As birds are chiefly formed to inhabit the empty regions of air, all their parts are suited to that purpose. Externally they seem surprisingly adapted for swiftness of motion. The shape of their body is sharp before, to facilitate its passage through the air; it then rises by a gradual swell, and falls off in an expansive tail, that assists in keeping it buoyant, while the fore parts are cleaving the air by their sharpness. They have, not unaptly, been compared to a vessel making its way through the water; the trunk of the body answering to the hold, the head to the prow,

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the tail to the rudder, and the wings to the oars.

Another cause of admiration in the external formation of birds is the position of the feathers, which generally tend backwards; and thus by laying one way and over each other in an exact and regular order, answer all the purposes of warmth, speed, and security. That part of the feathers next the body is furnished with a warm and soft down, and the external part is arrayed with a double beard in two ranks, longer at one end than the other. These beards are a row of little flat thin laminæ, disposed and inserted in a line, as perfect and regular as if their extremities had been cut with scissars. But lest these feathers should receive any injury by their violent attrition against the air, or imbibe the moisture of the atmosphere, the bird is furnished with a gland behind, containing a quantity of oil, which it occasionally presses out with its bill and lays over every feather that requires dressing. This gland, which is situated on the rump, is furnished with an aperture, surrounded with feathers somewhat like the pencil of a painter. Such poultry, however,

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as live principally under cover, have a smaller stock of this fluid than those which reside in the open air. The feathers of an hen, for instance, are pervious to every shower, but a swan, a goose, a duck, or a morehen, and all such birds as nature has directed to live upon water, have their feathers dressed with oil from the day of their quitting the shell: their magazine contains a provision of this fluid, proportioned to the necessity of its consumption. The flesh indeed contracts a flavour from it, which, in some, it renders so very rancid as to be unfit for food: but, if the flesh is injured by it, the feathers are improved, and made more valuable for all the domestic purposes to which they are usually applied.

The feathers, which form the cloathing of birds, equally demand our admiration. The shaft of every feather is made proportionably strong, but hollow below to contribute to its lightness, and filled above with a pith to afford nourishment to the beard that springs from the shaft of the feather on either side. Nature has placed these feathers according to their length and strength, the largest and strongest han-
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Of BIRDS in general.

ving the greatest share of duty in flight. The beard of the feather does not consist of one continued membrane, because, if it were broken, it could not easily be repaired; it is therefore composed of a great number of layers, each layer somewhat resembling a feather, and lying against each other in close conjunction: these layers are broad, and of a semicircular form towards the shaft of the feather, to add to their strength, and keep the closer to each other when in action. Towards the external part of the beard or vane, these layers grow slender and taper; on their underside they are thin and smooth, but their upper external edge is parted into two hairy edges, with a different sort of hairs on each side, broad at bottom, and slender and bearded above.

The wings of birds come next under consideration: in those which fly, they are usually placed at that part of the body which serves to poise the whole, and support it in the air. They answer to the four legs in quadrupeds, and, at the extremity of this, they have a kind of appendix, which is sometimes called the bastard wing. The quills

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with which this instrument of flight is furnished, differ from the common feathers only in their size, being considerably larger; but they spring from the deeper part of the skin, their shafts lying almost close to the bone. The beards of the strongest of those quills are broader on one side than on the other, contributing by that means to the progressive motion of the bird, and the closeness of the wing.

All birds are furnished with two very strong pectoral muscles on each side of the breast bone. In quadrupeds, as well as in men, the muscles of the thighs and the hinder parts of the body, are by far the strongest; but in birds it is otherwise; the pectoral muscles, which give motion to the wings, or arms, are of enormous strength, while those of the thighs are weak and slender. By means of these, a bird can move its wings with a degree of strength which is almost incredible, when the size of the animal is considered. The flap of a swan's wing would break the leg of a man, and an eagle has been known to kill a man on the spot by a similar blow. Such is the force and lightness of the wing, that no machine, which

which human skill can contrive, is capable of giving such force to so light an apparatus. The art of flying, therefore, has so frequently been sought after in vain, and indeed it cannot possibly be attainable; for man cannot encrease the force of his flying machine, without encreasing its weight also.

In all birds, nocturnal ones excepted, the head is smaller in proportion to the body than in quadrupeds, that it may more readily cleave the air in flying, and prepare a more easy passage for the body. Their eyes are also flatter and more depressed than in quadrupeds, and the pupil on each is encompassed by small plates of bone under the outer coat of the organ, to strengthen and defend it from injuries. Birds have also a kind of skin, called the nictitating membrane, with which they can with pleasure cover their eyes, as with a veil, though their eye-lids continue open. This membrane proceeds from the larger or more obtuse corner of the eye, and probably serves to wipe, cleanse, and moisten its surface. The eye of birds is admirably adapted for vision,

by a particular expansion of the optic nerve, which renders the impressions of external objects more vivid and distinct.

The sense of seeing, in birds, is infinitely superior to that of other animals; and indeed it appears necessary to the support and safety of those creatures. Were the eye less perfect, the bird, from the rapidity of its motion, would strike against almost every object in its way; and it could hardly find subsistence unless possessed of a power to discern its food from above with astonishing sagacity. A kite, for example, from an almost imperceptible height in the clouds, darts on its prey with the most unerring aim; and an hawk perceives a lark at a distance beyond the reach of the human eye.

Birds have no external ears, being only furnished with holes to convey sounds to the auditory canal. The horned owl, indeed, and a few other birds, seem to have external ears; but this appearance is occasioned by some feathers sticking out beyond the rest on each side of the head. These feathers encompassing the ear-holes in birds, may perhaps supply the defect of the exterior ear, and collect sounds to be trans-

transmitted to the internal sensory. The extreme delicacy and sensibility of this organ is shewn by the facility with which some birds learn tunes, and by the greatest exactness of their pronunciation in repeating words.

The sense of smelling appears equally perfect in the generality of birds. Many of them scent their prey at a vast distance, and others are protected by this sense against their insidious pursuers. In decoys for catching ducks, the men who attend upon that business always keep a piece of turf burning near their mouths, upon which they breathe, lest the fowl should smell them and make its escape.

The legs and feet of birds are made very light, for their easier transportation through the air. The toes of those which are calculated for the waters, are webbed; in others they are separate, the better to enable them to hold objects or cling to the branches of trees with safety. Such as have long legs, have also long necks, as they would otherwise be incapable of gathering up their food. But it does not naturally follow that those which have long necks should have long legs, for swans and geese,

geese, whose necks are extremely long, have very short legs, and these are better fitted for swimming than for walking.

The bones of every part of the body of birds are extremely light and thin, and all the muscles very slight and feeble, except that which affords motion to the wings. The tail serves to counterbalance the head and neck, to guide the animal's flight like a rudder, and to assist when it is ascending or descending. If we particularly examine the internal parts of birds, we shall find the same wonderful conformation fitting them for a life in air, and increasing the surface by reducing the solidity. Their lungs, which are usually called the sole, adhere to the sides of the ribs and back, but the ends of the branches of the wind-pipe open into them; while these have opening into the cavity of the belly, and convey the air drawn in by breathing into certain receptacles resembling bladders extending the length of the whole body. The wind-pipe makes many convolutions or turnings in the bodies of some birds, and it is then called the labyrinth. This difference of the wind-pipe is often found in animals that are

pear to be of the same species. For instance, the wind-pipe of the tame swan makes a straight passage into the lungs; while that of the wild swan, which to all external appearance seems the same animal, pierces through the breast-bone, and has several turnings there, before it comes out again and goes to enter the lungs. This is a difficulty which no naturalist has hitherto been able to account for. These turnings cannot be intended to form the voice, because those fowls which are without them are vocal: we cannot therefore ascertain whence some birds derive that loud and various modulation in their warblings, but this we can venture to assert, that birds, in proportion to their bulk, have much louder voices than animals of any other kind; for the screaming of a peacock is as loud as the bellowing of an ox.

Though birds are destitute of a bladder for urine, they have large kidneys and ureters, by which this secretion is made, and carried away by one common canal.

From the simple conformation of birds, they have, as may naturally be supposed, but few diseases: one, however, they are subject to, from which

quadrupeds are exempt ; this is their annual molting ; for, once in every year, all manner of birds cast off their old covering, and obtain a new one. They are all disordered during the molting season ; the courageous bird then loses its fierceness, and such as are weakly often expire under this natural operation. Additional feeding cannot at that season maintain their strength, when they always cease to breed ; that nourishment which produces the young, being wholly absorbed by the demand required for supplying the growing plumage.

Those, however, who have the management of singing-birds, have a method of accelerating this molting-time. They enclose the bird in a dark cage, where, by keeping it excessive warm, they throw the poor little animal into an artificial fever. This produces the molt before its proper time ; the old feathers fall off, and are succeeded by a new sett, more brilliant and beautiful than the former. The bird-fancyers say this encreases the vivacity of the animal, and improves its singing, but it should also be observed that not above one bird in three survives the operation.

Nature has kindly provided that, in winter, when there are the fewest provisions, the appetites of birds shall be least craving. At the beginning of spring, when food begins to be plenty, the strength and vigour of these animals return. The abundance of provisions and the mildness of the season then incite to love, and all nature teems with life, which it seems disposed to continue.

OF THE GENERATION AND INCUBATION OF BIRDS.

AT the return of spring, those vital spirits, which, in some degree, were locked up during the winter, begin to expand. Those warblings which had been hushed during the colder seasons, now begin to animate the fields, and every grove and bush resounds with the delightful concert. But this harmony of the grove, so much admired by man, is not meant for his amusement; it is usually the call of the male to the female; his efforts to amuse her during the times of incubation or fitting; or it is a challenge between two males

contending for the affection of a favourite.

Birds begin to pair at the approach of spring, and then provide for the support of a future progeny. The loudest notes upon these occasions are usually from the male ; the hen expressing her consent in a short interrupted twittering. This compact, for the season at least, is faithfully observed : many birds live together for years with inviolable fidelity ; and when one dies, the other does not long survive it. We must not, however, expect to find this conjugal fidelity among the poultry in our yards, where their freedom is abridged, and their manners corrupted by slavery : we must look for it in our fields and our forests, where nature continues in unadulterated simplicity, and where every little animal seems prouder of his progeny than pleased with his mate.

When fecundation is performed the female begins to lay. Such eggs as have been impregnated, (and such only) are prolific ; the others, which are produced without any congress, continue barren, and become addled by incubation. But, previous to laying, the nest

nest is to be made, which is done with no small degree of assiduity, and apparent design. Some naturalists assert that birds of one kind always make their nests in the same manner, and of the same materials; but, it is certain, that they vary this as the materials, places, or climates differ. The red-breast, for instance, makes its nest of oak-leaves in some parts of England, and in other parts with moss and hair. Some birds that build a very warm nest in this island, are less solicitous in the tropical climates, where the heat of the weather promotes the business of incubation. In general, however, every species of birds has a peculiar kind of architecture, which is adapted to the number of eggs, the climate, or the respective heat of the animal's own body. Where the eggs are numerous, a warm nest is requisite, that the animal heat may be equally diffused to all. The wren, for instance, makes its nest very warm; for, having a great many eggs, it is necessary to distribute warmth to them in common. On the contrary, the plover has but two eggs, which its body is at once capable of covering, and consequently it is not so solicitous about

about the warmth of its temporary habitation. Climate sometimes occasions great alterations; some water-fowl that make a very slovenly nest with us, are more particular in the structure of it in the cold regions of the north; where they take every precaution to make it warm, and some kinds are known to strip the down from their breasts, to line it more effectually.

Birds usually resort to hatch in those climates and places where their food is found in the greatest plenty, and always in that season when provisions are in the greatest abundance. Aquatic birds, and those of the largest kinds, select the places which are remote from man, their food in general being different from that which is cultivated by human labour. Some have only the serpent to fear, and fabricate their nests so as to hang upon the end of a small bough, forming the entrance from below, which secures them from the serpent, or the monkey tribes. But the small birds, which feed upon fruits and corn, and commit their petty thefts upon the produce of human industry, use every precaution to conceal their nest from man. On the contrary,

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the large birds, remote from human society, endeavour to render theirs inaccessible to wild beasts or vermin.

While the female is hatching, her patience is astonishing ; neither the calls of hunger, nor the approach of danger, can force her from the nest. Though fat when she begins to sit, yet, before incubation is over, she is usually reduced to skin and bone. Ravens and crows furnish the female with food while she is sitting ; but this is not the practice of most of the smaller birds : during the whole time the male sits upon some neighbouring tree, and sooths her with his singing, frequently taking her place when she is weary, or extremely hungry, and continuing upon the eggs till she returns. Sometimes, indeed, the eggs acquire too great a degree of heat, when the hen removes to let them cool a little, and afterwards returns with pleasure and perseverance to resume her task.

The production of young seems to be the great æra of happiness in animals of this class. At that time nothing can exceed their industry and spirit : in defence of its young, the most timid becomes courageous ; and those of the rapacious

rapacious kind are, at this season, uncommonly fierce and active: they hasten with their prey, yet throbbing with life, to the nest, and early initiate their young to scenes of slaughter and cruelty. Birds of a milder nature are not less busily employed; the minuter kinds discontinue their singing, being engaged in the more important pursuits of common subsistence.

While the young continue in the nest, the old ones provide them with a regular supply of food; and that one may not receive more nourishment than the rest, each of the young is served with the repast in turn. If they discover that man has been busy with their nest, or has handled the little ones, they sometimes abandon the place by night, and provide a more secure, though less commodious retreat for their brood. When the whole family is fully plumed, and they are capable of avoiding danger, they are led forth in fine weather, and taught the paternal art of providing for their subsistence. They are conducted to the places where their food is to be found; they are instructed in the method of taking it and carrying it away; and then led again to the nest, where

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they continue a day or two longer. At length, when they are fully enabled to provide for themselves, the old ones, for the last time, take them abroad, conduct them to the accustomed places, and finally forsake them ; all connection between them being totally at an end.

Those birds which are hatched earliest in the season are the strongest and most vigorous ; the animals themselves seem sensible of this, and endeavour to produce early in the spring ; but if their endeavours are obstructed, by having their nests robbed, or any other accident, they still persevere in their efforts for a progeny, and it sometimes happens that they are retarded by a variety of accidents to the midst of winter. The number of eggs which any bird can lay in the course of a season, has never yet been ascertained ; it is however certain that such as would have laid but two or three at the most, if their eggs are taken from them from time to time, will lay at least ten or a dozen ; and a common hen, if moderately fed, will lay about an hundred from the beginning of spring to the latter end of autumn. It is generally observed, however, that the smallest and weakest animals

animals are the most prolific, while the rapacious and strong are abridged by sterility. Such kinds as are easily destroyed are therefore as easily repaired; and Nature, where she has denied the power of resistance, has given fertility as a compensation.

Birds in general, though naturally timid, are seldom scared away from their usual haunts. Though perfectly formed for a wandering life, and supplied with powers to satisfy all their appetites, and though they are so well qualified for changing place with ease and rapidity, yet most of them remain contented in the districts where they have been bred, seldom exerting their powers in proportion to their endowments. The rook, if undisturbed, will never desert his native grove; the black-bird does not quit his usual haunts; and the red-breast claims a certain district, from whence he seldom wanders, but, though seemingly mild, drives from his limits every one of the same species, without pity or remorse.

Fear, climate, or hunger are the chief incitements to migration; from one of these powerful motives those which are called birds of passage, annually

nually forsake us for some time, and make their regular returns. The curiosity of mankind has been greatly excited by these annual emigrations, and yet few subjects remain so much involved in darkness. It is generally supposed, that the cause of their retreat from these parts of Europe, is either a scarcity of food at certain seasons, the alteration of the climate, or the want of a secure asylum from the persecution of man, during the times of incubation and bringing up their young. Thus, in Sweden, the starling at the approach of winter, finds subsistence no longer in that kingdom, and therefore descends every year into Germany ; and the hen chaffinches of the same country are observed to fly through Holland in large flocks every year, to pass their winter in a milder climate. Some birds undertake journeys that might intimidate even human perseverance. In spring, the quails forsake the burning heats of Africa for the milder sun of Europe, and after continuing with us during the summer, steer their flight back to enjoy the temperate air of Egypt, which then begins to be delightful. These undertakings

ings appear to have been preconcerted; some days before their departure, they assemble in some open place, and, by a kind of chattering, seem to debate on the method to proceed. Their plan of operations being resolved upon, they all take flight together, and frequently appear in such immense numbers, that, to mariners at sea, they have the appearance of a cloud. The greatest number, among which are the strongest, carry their plan into execution; but there are many that grow weary in the way, and, quite exhausted by the fatigues of their flight, drop down into the sea, and sometimes, by falling upon the decks of vessels, become an easy prey to the mariners.

Among the variety of water-fowl that visit our shores, how few are known to breed here? It is certain that they cannot quit this country merely for the want of food; to obtain a secure retreat is perhaps their principal motive. This country is too populous for birds so shy and timid as they usually are: many species of birds which now migrate, remained with us throughout the year, when a great part of this island was an uncultivated tract of land.

of woods and marshes. In former times, the great heron and the crane bred familiarly in our marshes, and seemed to animate our fens, but they now forsake the country. Like most cloven-footed water-fowl, they built their nests upon the ground, and were exposed to every invader. But as agriculture encreased, and the country grew populous, these animals were more and more disturbed. Until then they had little to fear, the surrounding marsh defending them from all the carnivorous quadrupeds, and their own strength from birds of prey ; but upon the intrusion of man, they were at length obliged to seek, during the summer, some lonely habitation, at a distance from dangers and alarms.

Though the tribes of the duck kind are numerous, there are only five that breed here, viz. the tame swan, the tame goose, the sheldrake, the eider-duck, and a small number of the wild ducks. The rest unite with that amazing multitude of wild fowl which annually repair to the dreary lakes and deserts of Lapland, from the more southern countries of Europe : there they perform in full security the duties

of incubation and nutrition. From the thickness of the forests in those regions, the ground continues moist and penetrable during the summer season, and the woodcock, snipe, and other birds with tender bills, can feed with convenience and ease; while those which are web-footed find plenty of food from the insects, which are incredibly numerous.

When they migrate from the north, they usually quit their retreat in September, and disperse themselves over all the southern parts of Europe. To observe the order of their flight is entertaining; sometimes they range themselves in a long line, and sometimes they march angularly, forming two lines which unite in the center, like the letter V reversed. The leader at the point seems to cleave the air, to facilitate the passage for those which are to follow; and, when he becomes weary of this laborious station, he retreats into one of the wings of the file, and is succeeded by a fresh commander. About the beginning of October, they make their appearance among us: at first they circulate round our shores, and afterwards by severe frost are

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compelled to repair to our lakes and rivers. Some, however, of the web-footed fowl, of harder constitutions than the rest, endure the rigours of their northern climate the whole winter; but when the winters are uncommonly severe, they find it necessary to seek for more southern skies. In these cases only we are visited by the diver, the wild swan, and the swallow-tailed sheldrake; nothing but the severity of their own winters at home being able to compel them to visit our coasts.

It may appear astonishing how such irrational animals should be able to perform such long journeys; how they should know whither to steer, when they engage in such an enterprize; but the same instinct which governs all their actions, perhaps operates here. Indeed they rather follow the weather than the country; they steer only from colder or warmer climates into those of an opposite nature; and, as they proceed, finding the variations of the air agreeable to them, they go on till they discover land to repose on.

There is, however, a circumstance attending the migration of swallows, which wraps this subject in great ob-

scurity. At the approach of the European winter, it is universally allowed that they are seen, in amazing numbers migrating into warmer climates : it is also well attested that their return into Europe is about the beginning of summer, but it is equally true that many of them continue torpid here during the winter, making their retreats, like bats, into old walls, or the hollow of trees ; or even sinking into the deepest lakes, where they find security for the winter season, by remaining in clusters at the bottom.

It seems to be difficult to account for this difference in these animals, thus variously preparing to encounter the winter. It has been supposed that in some of them the blood might lose its motion by the severity of the cold, and thus the bird became torpid ; but Mr. Buffon, by placing many of this tribe in an ice-house, discovered that the cold by which their blood was congealed was also fatal to them. It therefore remains a doubt to this hour, among naturalists, whether there may not be a species, apparently like the rest, but differently formed within, in order to fit them for a state of insensibility during

ing the winter here. Some indeed have suggested that those which were found thus torpid, were such only as were too weak, or hatched too late to join in the general emigration. But it was upon such as these that Mr. Buffon tried his experiment, and they all died under the operation.

Though there are some birds, which by emigrating, become inhabitants of almost every part of the earth; yet in general every climate has birds peculiar to itself. Those of the Temperate Zone are not very remarkable for the beauty of their plumage, but the smaller kinds fully compensate for this defect by the melody of their voices. The birds of the Torrid Zone are bright, vivid, and beautiful in their colours, but are either totally silent, or have most horrible screaming voices. The Frigid Zone, where the seas abound with fish, is stocked with birds of the aquatic kind, in much greater plenty than in Europe.

Birds, in all countries, live longer than the quadrupeds or insects of the same climate. Even the life of a man is short when compared to that which some

some of these animals enjoy. It is said that swans have lived three hundred years; geese have been known to live eighty years; and linnets and other small birds are often found to reach fourteen or fifteen years, though imprisoned the whole time in cages.

Birds in general, are proportionably smaller than quadrupeds; that is, the greatest of one class is far superior in magnitude to the greatest of the other. The ostrich, which is the largest of birds, bears no proportion to the elephant; and the smallest humming bird, which is the least of the class, is considerably smaller than the mouse. The extremities of nature are plainly discernible in these; the ostrich seemingly covered with hair, and incapable of flight, approaches the quadruped class; while the humming-bird, which does not exceed the humble bee in magnitude, and has a fluttering motion, seems nearly allied to the insect. But these extremities are rather objects of human curiosity than utility. It is the middle order of birds which man has taken under his protection, and which administer to his pleasures or necessities. How

far

far these animals are capable of instruction is manifest to those who have the management of hawks; and a very surprizing instance of this was seen a few years ago in London: a Canary bird was taught to pick up the letters of the alphabet, and to place them at the word of command, so as to spell the name of any person in company. The motions which upon this occasion were given by the master, and obeyed by the little animal, were unobserved by every other spectator.

The most obvious distinction of birds is those that live by land, and those that live by water; land and water fowl are easily distinguishable by the legs and toes. Land birds have their toes divided, without any membrane or web between them, and seem calculated for the purposes of running, grasping or climbing: but the legs and feet of water fowl are formed for the purposes of wading in the water, or swimming on its surface. The legs of those that wade are usually long and naked: swimming fowls have the toes webbed together like those of a goose, which, like oars, serve to drive them forward with greater velocity. The formation

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of land and water fowl is indeed as distinct as their habits; and nature seems to point out this obvious distribution in methodizing these feathered animals: but as the number of birds already known amounts to above eight hundred, and new ones are daily adding to the catalogue, it is not sufficient that we are able to distinguish a land from a water fowl; we ought to be capable of distinguishing the different kinds of birds from each other, and even the varieties in the same kind, when they are presented to our view.

All birds are divided by Linnæus into six classes. 1. Those of the *rapacious kind*. 2. *The pie kind*. 3. *The poultry kind*. 4. *The sparrow kind*. 5. *The duck kind*, and 6. *the crane kind*. The various kinds of land birds are comprehended in the first four, and those which belong to the water, in the two last.

Birds of the *rapacious kind* are such carnivorous fowl as live by rapine: they are distinguished by their beak, which is hooked, strong, and notched at the point; by their short muscular legs, their strong toes, and their sharp and crooked talons; by the strength of their body, and the impurity of their flesh;

flesh; by the nature of their food; and by the cruelty and ferocity of their manners.

The beak of the *pie kind* is different from that of the rapacious kind, and in some degree resembles a wedge, being fitted for the purposes of cleaving. Their legs are short and strong, their body slender and impure, and their food miscellaneous. They nestle in trees, and the female is fed by the male during the time of incubation.

The bill of the *poultry kind* is a little convex, for the purposes of gathering their food. The upper part of the beak hangs over the lower, their bodies are fat and muscular, and their flesh white and pure. They live principally on grain, which is moistened in the crop. They make an artless nest on the ground, and lay a great number of eggs. They are strangers to conubial love, and, unlike the other classes of birds, are promiscuous in their amours.

All the beautiful and vocal class of birds that adorn our fields and groves are comprehended under the *sparrow kind*. Their bills resemble forceps for catching

catching hold of any thing: their legs are formed for hopping, their bodies are tender, and in such as feed upon grain are pure; but impure in such as feed upon insects. They live chiefly in trees, and many of them shew great knowledge of architecture in the structure of their nests: they display great fidelity in the connubial state.

In birds of the *duck kind*, the bill serves as a kind of strainer to their food it is smooth, covered with skin, and nervous at the point. The legs of these birds are short, and their feet formed for swimming, the toes being joined together by a web. They live in waters and chiefly build their nests upon land.

Birds of the *crane kind* have the bill formed for the purposes of searching and examining the bottom of pools: their legs are long, their toes have no web between them, their thighs are half naked, their body slender and covered with a thin skin, their tail short and their flesh savoury. They live in lakes, and chiefly build their nests upon the ground.

Such is the division of Linnæus with respect to birds; but we have venture



Ostrich



Cassowary



to differ from him in several particulars, though, like him, we have divided the history of them into six classes; first giving the history of four or five birds that cannot well be ranged systematically, viz, the ostrich, the cassowary, the emu, the dodo, and the solitaire. These, from their extraordinary magnitude, are sufficiently distinguishable from others, and, from their incapacity of flying, lead a different life from the rest of the feathered creation.

THE OSTRICH.

THE ostrich is the first of the feathered tribe that seems to unite in itself the class of quadrupeds and birds; for though it has the general outline and properties of a bird, it retains many of the marks of the quadruped. It resembles the camel in appearance, and is almost as tall; it is cloathed with a plumage that more resembles hair than feathers, and its internal parts are as much like those of quadrupeds as of the bird creation. This animal, therefore, may be considered as filling up that vacuum in nature which separates one class of beings from another.

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Of all birds the ostrich is the largest. Travellers assure us that they are sometimes found as tall as a man on horseback; and some of those which have been shewn in England, exceeded seven feet in height. The head and bill resemble those of a duck, the neck has some similitude to that of a swan, and the legs and thighs are like those of a hen; though the whole appearance bears a strong resemblance to that of a camel. But, to descend to particulars, this animal is usually seven feet high from the top of the head to the ground, and about four from the back to the ground when the neck is stretched out in a right line, it measures six feet from the head to the rump, and the tail about a foot more. One of the wings is a foot and a half long without the feathers, and with the feathers, three feet. The plumage is generally black and white, though it is said to be sometimes grey: the largest feathers, which are at the extremities of the wings and tail, are usually white; the next row is black and white; and the small feathers of the back and belly are a mixture of black and white. This animal has feathers on the sides of the thighs.

under the wings: that half of the neck which is next to the body, is covered with smaller feathers than those on the belly and back, and like them are a mixture of black and white.

These feathers are peculiar to the ostrich: other birds have several sorts, some of which are soft and downy, and others hard and strong; but almost all the feathers of an ostrich are as soft as down, and utterly unfit to serve it for flying, or to defend it against external injury. The webs on the feathers of other birds are broader on one side than on the other, but in those of the ostrich round the shaft is exactly in the middle. The head and the upper part of the neck of this animal are covered with very fine white shining hair, with small tufts in a few places, consisting of about ten or twelve hairs, which grow from a single shaft about the thickness of a pin. At the end of each wing there is a kind of quill resembling the quill of a porcupine, which is of an horny substance, hollow, and about an inch long. There are two of these on each wing, the largest of which is at the extremity of the bone of the wing, and the other about a foot

lower. The neck appears proportionably more slender than that of other birds, from its not being covered all over with feathers.

The bill of the ostrich is short and pointed; the external form of the eye resembles that of a man, the upper eyelid being furnished with eye-lashes which are longer than those on the eyelid below: the tongue is very short and small, and composed of cartilages, and ligaments, intermixed with fleshy fibres.

The thighs, which are large and plump, are covered with a flesh-coloured skin, which appears greatly wrinkled. Some of these animals have a few small scattered hairs on their thighs, and others are entirely without: the legs are covered with large scales, and the ends of the feet are cloven, having two very large toes on each, which are also covered with scales: the toes are of unequal sizes; that on the inside is the largest, and is about seven inches long, including the claw, which is three quarters of an inch in length, and nearly the same in breadth. The other two has no claws, and does not exceed four inches in length.

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The internal parts of the ostrich are peculiarly formed: at the upper part of the breast under the skin, the fat is two inches thick; and on the fore part of the belly it is two inches and an half thick in some places, and as hard as suet. It has two distinct stomachs, the lowermost of which somewhat resembles the crop in other birds, and is considerably larger than the other. The second stomach or gizzard, has externally the shape of a man's stomach, and when opened is always found full of variety of substances, such as beans, barley, hay, grais, stones, &c. some of which are as large as a pullets egg. The kidneys, which are eight inches in length and two in breadth, differ from those of other birds in not being divided into lobes; and the heart and lungs are separated by a midriff, as in quadrupeds.

The ostrich is a native of the Torrid Regions of Africa, and has long been celebrated by those who have mentioned the animals of that region. The flesh of this animal is proscribed in scripture as unfit to be eaten. It is described by most of the ancient writers, and consequently was well known in

their times. It seems particularly formed to live among the sandy and burning deserts of the Torrid Zone, and it seldom migrates into tracts that are more mild or fertile. The Arabians assert that the ostrich never drinks, and indeed the place of its habitation seems to confirm the assertion. In the most solitary and horrid deserts, where there are few vegetables to cloath the surface of the earth, and where the rain never comes to refresh it, ostriches are seen in large flocks, which, to a distant beholder, appear like a regiment of cavalry. The most barren desert is capable of supplying these animals with provision, as they can eat almost any thing; and those dreary tracts are doubly grateful, as they afford both food and security.

Of all animals, the ostrich is the most voracious: it will devour leather, grals, hair, stones, metals, or any thing that is given to it; but those substances which the coats of the stomach cannot soften, pass whole; so that glass, stones, or iron, are excluded in the same form in which they were devoured. All metals, indeed, which are swallowed by any animal, lose a part of their weight from

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the action of the juices of the stomach upon their surface. A quarter pistole, which was swallowed by a duck, lost seven grains of its weight in the gizzard before it was excluded; and it is probable that a greater diminution of weight would happen in the stomach of an ostrich; considered in this light it may be said to digest iron, but not in that extensive sense which is propagated by vulgar error. Valispieri found the first stomach of an ostrich filled with a jumbled collection of brass, copper, iron, tin, lead, wood, stones, glaies, cords, nuts and grafts; and, among the rest, a piece of stone of above a pound weight. It is probable that this animal is obliged to fill up the great capacity of its stomach in order to be at ease; and when nutricious substances are not to be obtained, it supplies the void with any thing that offers.

In their native deserts, these animals live chiefly upon vegetables, where they lead a social inoffensive life, the male assorting with the female with connatural fidelity. Their eggs are very large, some of them measuring above five inch-

ches in diameter, and weighing above fifteen pounds. The season for laying depends entirely upon the climate in which the animal is bred: in the north of Africa, this season is about the beginning of July; in the south, it is towards the latter end of December. These birds are very prolific, and usually lay from forty to fifty eggs at a clutch. The shells of these eggs are extremely hard, and it has been currently said that the female deposits them in the sand, to be hatched by the heat of the sun; but this opinion is erroneous; for Kolben, who has seen great numbers of them at the Cape of Good Hope, affirms that they sit on their eggs like other birds, and that the male and female take this office by turns, as he had frequent opportunities of observing. In those hot climates, indeed, there is less necessity for the continual incubation of the female, than in the more temperate zones; and she more frequently leaves her eggs, which are in no danger of being chilled by the weather: but though she deserts them by day, she always carefully broods over them by night. Some au-

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thors also inform us that ostriches forsake their young as soon as they are excluded from the shell, but this is certainly a mistake, for Kolben assures us that the young ones are not able even to walk for several days after they are hatched; during which time the old ones are very assiduous in supplying them with grass, and defending them from danger. The young are of an ash colour the first year, and are covered all over with feathers, but after some time they drop those feathers, and those parts which usually are covered, assume a different and more becoming plumage.

It is on account of the beauty of a part of the plumage of this harmless animal, particularly the long feathers of which the wings and tail are composed, that man has been so active in pursuing it to its deserts. Pliny assures us that in his time the caps and helmets of the soldiers were adorned with these plumes; the ladies of the East use them as an ornament in their dress, and the ladies of Great Britain have lately decorated their heads with the feathers of this animal. They are also used by

by undertakers, who place them upon hearses, and the heads of the horses which draw them, when the nodding plumes add greatly to the solemnity of the funeral. Those feathers are the most valuable which are plucked from the animal when living; those which are taken after its death being dryer, lighter, and more subject to be worm eaten.

The savage nations of Africa hunt these animals for their flesh as well as for their plumage; they consider it as a great dainty, and sometimes breed them tame that they may eat the young ones, of which the female is said to be the most delicate food. The ancient Romans had no aversion to the flesh of the ostrich; Aspicius gives us a receipt for making sauce for it. Even among the Europeans to this day, the eggs of the ostrich are said to be nourishing and well tasted, but they are too scarce to be often fed upon.

The Arabians train up their best and fleetest horses for the chace of the ostrich. As soon as the hunter comes within sight of its prey, he advances with a gentle gallop, so as still to keep the bird in view, but not to terrify him from

the plain into the mountains. The ostrich is the swiftest of all known animals which make use of their legs in flight ; therefore, when he observes himself pursued at a distance, he at first runs but gently, either from the insensibility of his danger, or supposing himself sure of escaping. In this situation there is a strong similitude between him and a man running at full speed : his wings, like two arms, keep working with a motion correspondent to that of his legs, and his speed, if properly employed, would soon take him out of the view of his pursuers ; but instead of moving in a direct line, he takes his course in circles ; while the hunters relieve each other, meet him at unexpected turns, and keep him wholly employed for two or three successive days. At length, finding all power of escape impossible, and exhausted with hunger and fatigue, he endeavours to hide himself from those enemies, which he cannot avoid, by covering his head in the sand or the first thicket he arrives at. Some of these animals venture to face their pursuers, and, though in general the most gentle animal in nature, when driven to desperation, will valiantly

liantly defend themselves with their beaks, wings, and feet; and so great is the force of their motion, that a man would be utterly unable to withstand them.

Sometimes, in order to take the ostrich, a man covers himself with that animal's skin, and placing an arm through the neck of it, counterfeits all the motions of this creature. By this artifice they approach it, and it frequently becomes an easy prey. It is also sometimes taken by dogs and nets.

Whole flocks of ostriches are bred by the inhabitants of Dara and Lybia, and are tamed without much trouble. But, in this domestic state, they are not only prized for their feathers and their flesh, but they are often ridden upon, and used as horses. Moore assures us that he saw a man travelling upon an ostrich at Joar, and Adamson asserts that at the factory of Podore, he saw two young ostriches, the strongest of which ran swifter than the best English racer, though he carried two negroes on his back.

It is however generally agreed, that the ostrich is a very stupid bird, and

soon forgetful of its young. As an instance of its stupidity, it hides its head in the reeds when pursued, thinking itself thus totally covered from the sight; and, as another proof, we are told, that they who go in pursuit of them, draw the skin of an ostrich's neck on one hand, which is found a sufficient lure to take them with the other. It is spoken of in the scripture, as the symbol of cruelty and forgetfulness. See Lament. iv. 3. Job. xxxix. 13, &c. which latter passage in Dr. Young's fine paraphrase we here subjoin.

Who in the cruel ostrich has subdu'd
A parent's care, and fond inquietude?
While far she flies, her scatter'd eggs are found,
Without an owner on the sandy ground:
Cast out on fortune, they at mercy lie,
And borrow life from an indulgent sky:
Adopted by the sun, in blaze of day
They ripen under his prolific ray.
Unmindful she, that some unhappy tread
May crush her young in their neglected bed.
What time she skims along the field with speed,
She scorns the rider, and pursuing steed.

Upon this last line Dr. Young observes from Xenophon, that Cyrus had horses which could overtake the goat, and the wild ass, but none that could reach this creature; and that one thousand golden

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ducats, or an hundred camels, was the stated price of a horse that could keep equal pace with them. The ingenious Abbé la Pluche remarks, that in all countries, where the ostrich is known, when they would speak of a mother who has little care of her children, they always compare her to an ostrich.

Modern travellers, however, have represented the ostrich in a much less odious light as a parent, than the ancient naturalists.

THE EMU.

THIS bird, which is also called the American ostrich, is an inhabitant of the new continent; and travellers seem to have been more solicitous in proving its affinity to the ostrich, than in mentioning those peculiarities which distinguish it from all others of the feathered creation. It is chiefly found in Guiana, in the inland provinces of Brazil and Chili, and the vast forests bordering on the mouth of the river Plata.

The emu is second in magnitude to the ostrich; it is by much the largest bird in the new continent, and usually

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measures six feet in height from the head to the ground. Its legs are about three feet long, and its thighs are almost as thick as those of a man: the toes are different from those of the ostrich, the American bird having three, and the other only two. In the length of its neck, the smallness of its head, and the flatness of its bill, it resembles the ostrich, but, in other respects, it is more like the cassowary. The form of its body appears round, the wings are short, and very ill suited to flying, and it is entirely destitute of a tail. It is covered on the back and rump with longish feathers that fall backwards, those on the back being grey, and those on the belly white. It moves swiftly, and seems assisted in its motion by a kind of tubercle behind, like an heel: in course it uses a very singular kind of action, lifting up one wing, which it keeps elevated for a time; when, letting that drop, it raises the other, and moves with such swiftness, that the fleetest dogs are thrown out in the pursuit.

The emu is a bird but little known, travellers have therefore given a loose to their imaginations in describing it. Nierenberg's account is too extraordi-

nary to be credited ; and Wafer asserts that he has seen great quantities of this animal's eggs on the desert shores, north of the river Plata, where they are buried in the sand to be hatched by the heat of the climate : but it is more probable that the eggs which Wafer had seen, were those of the crocodile, which are known to be hatched in this manner.

The young are familiar as soon as they are hatched, and follow the first person they see. Wafer asserts that he has been followed by many of them when they were young, but as they grew older they became more cunning and distrustful. The flesh, especially of those which are young, are good for food. As these animals are, by nature, so familiar, they might easily be reared up tame, and might probably answer domestic purposes, like the turkey or the hen ; especially as their maintenance could not be expensive, for, if the account of Narborough is to be relied on, they live entirely upon grafts.

THE CASSOWARY.

THE cassowary, with regard to magnitude, is next to the emu : it appears

seems indeed more bulky to the eye, its body being nearly equal, and its neck and legs much thicker and stronger in proportion. From the point of the bill to the extremity of the claws, it is about five feet and an half long, and the legs are about two feet and an half high. The largest toe, including the claw, is five inches long; and the claw alone of the least toe is three inches and an half long. The wing is so small as not to appear, being hid under the feathers of the back. The head, being without feathers, appears small, like that of an ostrich, having on the top a crest three inches high, like that of an helmet, and of an horny substance; but it does not cover the whole top, extending only from the middle of the crown to the bill. In most other birds, a part of the feathers serve for flight, and differ from those that serve merely for covering; but in the cassowary, all the feathers are of the same kind, and outwardly of the same colour. They are generally double, having two long shafts which grow out of a short one that is fixed in the skin. The stem or shaft is flat, shining, black, and knot-
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ted below, with a beard proceeding from each knot : the beards at the end of the large feathers are perfectly black, and, towards the root, of a grey tawny colour, shorter and like down, so that nothing appears except the ends, which are hard and black ; the other part being entirely covered. The feathers on the head and neck are so short and thinly sown, that the bird's skin appears almost naked. The feathers on the rump are extremely thick, but in all other respects are like the rest, excepting their being longer. The wings, when stripped of their feathers, are only three inches long, adorned at the ends with five prickles, of different lengths and thickness, bending like a bow : the longest of these prickles is eleven inches, and it is a quarter of an inch in diameter at the root, being thicker there than towards the extremity.

The colour of the eye in this animal, which is a bright yellow, and the globe being above an inch and an half in diameter, added to the peculiar oddity of the natural armour on the head, give it an air equally fierce and extraordinary. The hole of the ear is very

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large and open, having only a few small black feathers spreading over it. The neck is of a violet colour, inclining to that of slate, with spots of red in several places behind. The skin which covers the fore-part of the breast, on which the cassowary leans and rests, is hard, callous, and without feathers.

The internal parts of this animal are very remarkable; it unites with the double stomach of animals that live upon vegetables, the short intestines of those which live upon flesh: the intestines of the cassowary are not above a thirteenth part of the length of those of the ostrich. The heart is but an inch and an half long, and an inch broad at the base. It may be said upon the whole, that it has the head of a warrior, the eye of a lion, the defence of a porcupine, and the fleetness of a courser.

But, notwithstanding the cassowary is thus formed for a life of hostility, and for its own defence, it is a gentle inoffensive animal. It never attacks others, and, when attacked itself, instead of the bill, it rather makes use of its legs, kicking like a horse, or running against its pursuer, and, after beating him down, treading on him.

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The manner of going of this animal is remarkably singular : instead of moving directly forward, it kicks up behind with one leg, and, making a bound onward with the other, it travels with such velocity, that the swiftest racer would not be able to keep pace with him.

The cassowary, like the ostrich, is extremely voracious, swallowing every thing that comes within the capacity of its gullet. The Dutch assert that it not only devours glass, iron, and stones, but even burning coals without testifying the smallest fear, or suffering the least injury.

The eggs of the cassowary are of a grey ash-colour, inclining to green : they are neither so large nor so round as those of the ostrich. The largest are about fifteen inches round one way, and about twelve the other. The shell, which is not very thick, is marked with a number of little tubercles of a deep green.

The natural climate of this animal seems to be the southern parts of the most Eastern Indies. His domain appears to begin where that of the ostrich terminates. The latter has never been found beyond the Ganges; and the former



Dodo



Eagle



is never seen nearer than the islands of Banda, Sumatra, Java, the Molucca islands, and the corresponding parts of the continent. Yet even here the cassowary does not seem to have multiplied in any considerable degree, for a king of Java made a present of one of these birds to the captain of a Dutch ship, considering it as a great rarity. The ostrich, that is an inhabitant of the desert regions of Africa, continues numerous, and is still the unrivalled tenant of its own inhospitable climate. But the cassowary, which inhabits a more peopled and polished region, becomes scarcer every day; for, in proportion as man multiplies, the savage and noxious animals fly before him. They desert their ancient habitations at his approach, and seek a more peaceable though barren retreat; voluntarily exchanging plenty for freedom, and encountering all the dangers of famine, to avoid the oppressions of man, who calls himself the lord of the creation.

THE DODO.

SWIFTNESS is generally the attribute of birds, but the dodo is not entitled

titled to this distinction ; on the contrary, its appearance strikes the imagination, as if it was a thing the most unwieldy and inactive of all nature. Its body is almost round, massive, and covered with grey feathers ; it has two short thick clumsy legs resembling pillars, which seem to be but barely sufficient to support it. The neck is thick and pursy, and the head consists of two great chaps, that open beyond the eyes, and are large, black, and prominent ; so that when the animal extends its chaps, it appears to be all mouth. The bill is extremely long, and thick, and of a bluish white, sharp at the end, and each chap crooked in opposite directions, so as to resemble two pointed spoons that are laid together by the backs. It has a stupid and voracious physiognomy, which is increased by a bordering of feathers round the root of the beak, that appear like a cowl or hood, and finish this picture of stupid deformity.

The bulk of this animal, instead of contributing to its strength, only adds to its inactivity. The ostrich, the cassowary, and the dodo, are alike incapable of flying, but the two former supply

supply that defect by their speed in running: the dodo is scarce able to support its own weight, and moves forward with the utmost difficulty: it seems among birds what the sloth is among quadrupeds, equally incapable of defence or flight. It has wings indeed, which are cloathed with soft ash-coloured feathers, but they are too short to enable it to fly. It has a tail furnished with a few small curled feathers; but this tail is misplaced and disproportioned.

The dodo is a native of the isle of France; and the Dutch, who first discovered it there, gave it the appellation of the nauseous bird, not only on account of its disgusting figure, but also from the disagreeable flavour of its flesh: but succeeding observers contradict this first report, and assert that its flesh is good and wholesome eating, and that three or four dodos are sufficient to dine an hundred sailors. Some are of opinion that this is the same bird which travellers have described under the title of the bird of Nazareth, which description agrees with every particular, except that the feathers of the female

of the bird of Nazareth are said to be extremely beautiful.

THE GOLDEN EAGLE.

THIS is the largest and noblest of the eagle kind ; it weighs about twelve pounds, its length is three feet, and the extent of its wings is about seven feet four inches : the bill, which is three inches long, is of a deep blue colour, and the eye of an hazel colour : the sight and sense of smelling are very acute. The head and neck are covered with narrow sharp-pointed feathers, and of a dark brown colour, edged with tawny ; but, in very old birds, those on the crown of the head turn grey. The whole body is of a dark brown, and the feathers on the back are finely clouded with a deeper shade of the same : the wings, when not extended, reach to the end of the tail : the quill feathers are of a chocolate colour, and the shafts white : the tail is of a deep brown, irregularly barred and spotted with an obscure ash-colour, and generally white at the roots of the feathers ; the legs are yellow, short, and very strong, being three inches in circum-

circumference, and feathered down to the very feet: the toes are covered with large scales, and armed with most formidable claws, the middle of which being two inches long.

This species is found in the mountainous parts of Ireland, where it breeds on the loftiest cliffs. It usually lays three or four eggs, though seldom more than two are prolific; Providence denying a large encrease to rapacious birds, because they are noxious to mankind; but graciously permits an unlimited multiplication of such animals as are of service to him. This eagle is sometimes seen in Caernarvonshire, and there are some few instances of their having bred upon Snowdon hills.

Eagles in general fix upon those places which are remotest from man, upon whose possessions they seldom make their depredations, choosing rather to follow the wild game in the forest, than to risque their safety to satisfy their hunger.

The eagle may be considered among
birds, as the lion among quadrupeds: they are both sovereigns over their fel-
lows of the forest, and, equally magnanimous disdain all petty plunder,

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pursuing only such animals as are worthy the conquest : the eagle also disdains to share the plunder of another bird, rejecting every kind of prey which he has not acquired by his own pursuits. However hungry he may be, he never submits to carrion ; and, when satisfied, never returns to the same carcass but leaves it for other animals less delicate than himself.

Like the lion, he keeps the desert to himself alone ; it being equally extraordinary to see two pair of eagles on the same mountain, as two lions in the same forest ; and by keeping thus separate they find a more ample supply. These animals have a strong similitude in other respects ; the eyes of both are sparkling, and nearly of the same colour ; their claws are of the same form, and their cry equally loud and terrifying. Formed for war, they are enemies of all society, and are equally fierce, proud, and incapable of being tamed. Infinite art and patience are required to tame an eagle ; and even when taking young, and brought under long affiduity, it is still but a dangerous domestic, and seldom is brought to have an attachment for its feeder.

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Though at all times a formidable neighbour, the eagle is still more so when bringing up its young. Both male and female at that time exert all their force and industry to supply their brood. Smith informs us, in his history of Kerry, that a poor man in that county got a comfortable subsistence for his family, during a summer of famine, by robbing the eaglets of the food which the old ones brought in vast quantities: he protracted their attendance beyond the natural time, by clipping the wings of the young and regarding their flight. Had the countryman been surprized in this employment by the old eagles, he might have woefully experienced their resentment. It is dangerous to leave infants in places where eagles frequent, an instance being recorded in Scotland * of two being carried off by them; but fortunately the theft was discovered in time, and the children restored unhurt out of the eagle's nest to the affrighted parents.

In the same country a peasant resolved to rob the nest of an eagle that

* Sib. Hist. Scot. 14.

had built in a small island in the lake of Killarney. He watched an opportunity, and, while the old ones were away, he stripped and swam to the island. After robbing the nest of its young, and fastening them in a string, he was preparing to swim back with them ; but, while he was yet up to his chin in the water, the old eagles returned, and, missing their young, immediately attacked the plunderer, and, in spite of all his resistance dispatched him with their beaks and talons. In order to extirpate these pernicious birds, there is a law in the Orkney islands, which obliges the master of every house in the parish where an eagle is killed, to give the person who destroyed it a hen *.

Of all animals the eagle flies highest ; and from thence the ancients have given him the epithet of the *Bird of Heaven.*

The eagle has always been reckoned the king of birds ; whether on account of the superiority of his strength, the terror which he inspires into so many other animals on whom he preys, his natural fierceness, or the rapidity and

* Camden's Brit. I. 1474.

elevation of his flight. Bochart tells us, that this bird lives a century, and increases in bulk to his death. If this be true, we may easily credit the relation of Athenæus, who says, that eagles were carried by way of ornament at the triumph of Ptolemy, whose wings were twenty cubits long.

The voracity of this bird is so great, that he ravages all the neighbouring places, which are scarce sufficient to furnish him with prey necessary for his support. Hence, as we have already observed, two eagles are not to be found in the same quarter. Aristotle and Pliny say, that the eagles chace their young ones, not only out of the airies or nests, but even out of the country where they inhabit as soon as they are able to fly. They are not contented with the larger birds, as hens, geese, and cranes, but pursue rabbits, hares, lambs and kids, which they lift from the ground and carry off. Nay some tell us of their attacking even bulls. As the eagle lives wholly on the flesh of such animals as he kills, so he quenches his thirst with their blood, and never drinks water but when he is sick. It is said, that the swan is the only bird, which

can resist him, and that frequently he does it with success. All the other birds are afraid of the eagle to a sovereign degree ; they quake and tremble at his cry ; and even the dragon, when he hears him, takes refuge in his den. Nor are the fishes safe from his voracity : he perceives them even at the bottom as he skims over seas and lakes ; plunges immediately down with the rapidity of an arrow, and drags them to the bank, where he devours them. This wonderful instinct is referred to Job xxxix. 27, &c.

Sharpness of sight is a quality of the eagle, which sets him above all other birds : he seems even to be sensible of that advantage : and, to preserve it in his species, as soon as his young begin to have strength, he turns them towards the sun, and makes them fix their eyes upon it ; if any one cannot bear the heat and force of the rays, he chases him from the nest, as if he judged him unworthy of his protection and assistance, but attaches himself to the rest with a remarkable affection, even to the exposing his own life to preserve them, and fighting obstinately against all who would take them from him : he

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is seen fluttering in various ways round his nest to teach them to fly. He takes them afterwards upon his back, in such a manner, that the fowler cannot hurt the young, without piercing through the body of the old one : quits them in the middle of his course in order to prove them ; and if he perceives that they cannot as yet support themselves alone, and that they are in danger of falling, he darts himself below them with the greatest rapidity, and receives them between his wings. He is the only bird into which nature has instilled this kind of instinct ; which the scripture has chosen as an expressive symbol of the tenderness with which God protected his people in the wilderness. "I bare you," says he, "on eagles wings, and brought you unto myself :" Exod. xix. 4. So Deut. xxxii. 11 : " As an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings,—so the Lord, &c.

It is said that the reason why eagles who have not the fibres of their eyes stronger than other animals can look steadfastly on the sun, and support its fiercest rays, is, because they have two eye-

eye-lids: one, with which they shut their eyes entirely: the other, which is thinner, they draw over them, when they look upon a luminous object, which renders the glaring light much more supportable. However this be, it is certain, that the eagle rises to a prodigious height. To this instinct he owes the renewal of his strength and youth, in which the learned, and even the critics themselves are agreed; every ten years his feathers become heavy and less proper for flight: he then makes an effort and approaches nearer the sun than usual, and after being excessively heated, he plunges immediately into the sea: his feathers fall off, and new ones supply their place, which restore him to his pristine strength. It is this particular, perhaps, which David intended to express in the following words: "Thy youth shall be renewed like that of the eagle." Psalm. ciii. 5. And perhaps to this total loss of his feathers the passage in Micah i. 6. may refer; "Enlarge thy baldness as the eagle;" that is they to whom the prophet addresses himself, should cut off their hair in the time of mourning; be naked and stript like an eagle, when it casts all its feathers,

feathers, or when it moults, in common ; at which season, it is said to fall into a languishing condition, so as neither to be able to hunt after its prey as usual, nor to create terror in other birds.

Ælian attributes to the eagle a peculiar instinct of gratitude. He says, that one, which Pyrrhus had brought up, and which followed him every where, was so sensible of the death of that illustrious warrior, that he would not quit his body or take any nourishment. Another threw himself into the funeral-piles, where he saw them burning the corpse of him who had kept him till that moment.

Frequent allusions are made in Scripture to the swiftness of the eagle's flight, " My days are passed away as an Eagle," says Job, ix. 26. " Riches fly away as an eagle towards heaven." Proverbs xxiii. 5. " Our persecutors are swifter than eagles." Lam. iv. 9. Kings are compared to them, and in Ezekiel and the Revelation they make one of the cherubic living creatures, whose meaning it is so difficult to decypher ; and concerning which we should be glad of the conjectures of

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the learned. See Ezek. i. and 10.
Revel. iv.

The nest of the eagle is usually built in the most inaccessible cliff of the rock, and generally sheltered from the weather by some jutting crag that hangs over it; but they are sometimes wholly exposed to the winds, as well sideways as above; for the nest is flat, though built with great labour.

Eagles, says Mr. Pennant, are equally remarkable for their longevity, and for their power of sustaining a long abstinence from food. One of these species, which, at the time of his writing his *British Zoology*, had been nine years in the possession of Mr. Owen Holland of Conway, lived thirty-two years with the gentleman who made him a present of it; but he knew not its age when the latter received it from Ireland. The other remark is verified in the same bird; for, through the neglect of servants, it endured hunger for twenty-one days, without any sustenance whatever.

Such are the general characteristics and habitudes of the eagle; but in some these habitudes differ: the sea-eagle and the osprey, for example, live

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principally upon fish, and consequently build their nests on the sea shore, and by the sides of rivers, on the ground among reeds. They catch their prey by darting down upon them from above ; the Italians therefore call them *Aquila Piombina*, or the Leaden Eagle, comparing their violent descent on their prey, to the fall of lead into water.

THE BALD EAGLE.

THE body of the bald eagle is brown ; the head, neck, and tail white, and the upper part of the legs brown. It is an inhabitant of North-Carolina, and is remarkable for habits peculiar to itself. These eagles breed in that country all the year round ; and, as soon as the young are just covered with down and a kind of white woolly feathers, the female eagles lay again. These eggs are left to be hatched by the warmth of the young eaglets that continue in the nest ; the flight of one brood always making room for the next, that are but just hatched. These birds fly very heavily, and cannot overtake their prey like the rest of their tribe.

These

These eagles generally attend upon fowlers in the winter ; and, when any birds are wounded, they are sure to be seized by them, though they may escape the fowler. This animal will also frequently steal young pigs and carry them alive to the nest, which is a filthy place, composed of twigs, sticks, and rubbish, and generally almost full of half-eaten bones and putrid flesh.

THE RING-TAIL EAGLE.

THIS bird is common to the northern parts of Europe and America. It is equal in size to the royal eagle ; the bill is of a blackish horn colour ; the whole body of a dark brown, slightly tinged with rust colour ; but its remarkable characteristic is the band of white on the upper-part of the tail, which distinguishes it in all countries where it is found. The legs are feathered to the feet, the toes yellow, and the claws black. It is also called the white tailed eagle.

THE SEA EAGLE.

THIS bird is found in several parts of Great-Britain and Ireland. Turner says it was too well known in England in his days, for it made horrible destruction among the fish; he adds, that fishermen anointed their baits with the fat of this bird, imagining that it had peculiar alluring quality; they were so superstitious as to believe, that whenever the sea eagle hovered over a piece of water, the fish (as if charmed) would rise to the surface with their bellies upwards, and in that manner present themselves to them.

Though the sea eagle is no uncommon species, it seems at present to be little known, and has not been described by any writer since Clusius, except Pennant in his *British Zoology* *. It has generally been confounded with the golden eagle, to which it bears some resemblance. The colours of the head, neck, and body are the same with the golden eagle, but much lighter, the tawny part in this predominating: in size it is far superior: the bill is larger, more hooked, and more arched:

* Vol. I page 106.

underneath grow several short strong hairs or bristles, forming a sort of beard : some writers have therefore supposed it to be the aquila barbata, or bearded eagle of Pliny. The interior sides, and the tips of the feathers of the tail, are of a deep brown; the exterior sides of some are of an iron colour, in others spotted with white; the legs are strong, thick, and of a yellow colour, and feathered but little below the knees ; which is an invariable distinction between this and the golden eagle : this nakedness of the legs, however, is of no small convenience to a bird that preys among the waters. The claws are of a deep and shining black, exceeding large and strong, and hooked into a perfect semi-circle. Writers all agree that this eagle feeds principally on fish, which it seizes as they are swimming near the surface, by darting itself down upon them, but not by diving or swimming as some authors have asserted, who for that purpose have invented them one webbed-foot to swim with, and another divided foot to take its prey with. Martin, speaking of these eagles in the Western isles, says they fasten their talons in the back of the salmon, which

are often on the surface, and sometimes above water.

THE BLACK EAGLE.

THE black eagle is about half the size of the golden eagle; the body in general is blackish; the head and neck mixed with red. On the middle of the back between the wings, there is a large white spot mixed with red feathers, which, approaching the rump, become entirely of a darkish red. The feathers on the wings resemble those of a common buzzard, except that there is a dark streak running cross the prime feathers; and one that is whitish, terminating in an ash-colour at the tip of the wings.

THE OSPREY.

THOUGH Mr. Ray places this bird among the hawks, yet from one of the species lately taken, it appears to be of the eagle kind, and it was indiscriminately known by the name of the osprey and the eagle above one hundred and sixty years ago, as appears by Dr. Kay's description; it is therefore restored to the

aquiline rank under the name of the osprey.

This bird frequents rivers, lakes, and the sea shores : it makes its nest among reeds, and lays three or four white eggs of an elliptical form, somewhat less than those of a hen. It principally feeds on fish, which it seizes in the same manner that the sea eagle does; not by swimming, but by precipitating itself on them. Turner says it also preys on cootes and other water-fowl. The feet of the osprey are formed like those of other birds of prey; though Linnæus *, copying the errors of ancient writers, asserts that the left-foot is palmated.

The bird which is here described was a female: it was twenty-three inches long, and weighed sixty-two ounces; the breadth was five feet four inches; the wings, when closed, reached beyond the end of the tail, which consists of twelve feathers, like all the tails of those of the hawk kind; the two middle feathers were dusky; the others barred alternately with brown and white on the inner webs: on the joint of the

* Lin. Syst. 91. N^o. 21.

wing next the body was a spot of white; the quill feathers of the wings were black: the secondary feathers and the coverts dusky, the former having their interior webs varied with brown and white. The head was small and flattish; the crown white, marked with oblong dusky spots: the cheeks, chin, breast and belly were white, except that the last was spotted with a dull yellow; a bar of brown extends from the corner of each eye, along the sides of the neck, pointing towards the wing. The legs were very short, thick, and strong; their length being only two inches and a quarter, and their circumference two inches: their colour was a pale blue, the outward two turned easily backward; and, what claims our attention, the claw belonging to it is larger than that of the inner toe; in which particular it differs from every other bird of prey: but it seems peculiarly necessary to this kind, for the better securing its slippery prey.

THE CROWNED EAGLE.

THIS curious bird of the eagle species, is a native of Africa: the de-
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scription here given, is taken from the ingenious and accurate Mr. Edwards, who thus describes the bird: "the crowned eagle is about a third part less than the larger sort of eagles which we see in Europe, but appears to be strong and bold like them. The bill, and the skin which covers the upper mandible, (in which the nostrils are placed) are of a dusky brown colour: the corners of the mouth are cleft in pretty deep under the eyes, and are of a yellowish colour: the circles round the eyes are of a reddish orange colour: the fore-part of the head, the space between the eyes, and the throat are covered with white feathers, with small black spots: the hinder-part of the head and neck, the back and wings, are of a dark brown or blackish colour, the outer edges of the feathers being of a lighter brown; the quills are darker than the other feathers of the wings; the ridge in the upper parts, and the tips of some of the lesser covert feathers of the wings are white: the tail is of a brown colour, barred across with black, and on its under side appears of a dark and light ash-colour: the breast is of a reddish brown, with large trans-

verse black spots on its sides : the belly and covert feathers under the tail are white, spotted with black : the thighs and legs down to the feet are covered with white feathers, beautifully spotted with round black spots ; the feet and claws are very strong ; the feet are covered with scales of a bright orange colour ; the claws are black. It raises the feathers on the hinder part of the head, in the form of a crest or crown, from which it takes its name."

Like the other birds of the same name and species, the crowned eagle is remarkable for its voracity, and sharpness of sight.

The other birds of the eagle kind, where there are no remarkable peculiarities, are sufficiently described in the general account of the eagle ; we shall, however, give the distinct mark of every other bird of the eagle species.

The *Common Eagle* is of a brown colour, the head and upper part of the neck inclining to red ; the feathers of the tail are white, except that they grow blackish towards the ends : the four outer ones on each side are of an ash-colour, and the legs are cloathed with feathers of a reddish brown.

The

The *White Eagle* is entirely white.

The *Rough-footed Eagle* is of a dirty brown, spotted with white on the legs and under the wings; the feathers of the tail are white at the beginning and the point; the feathers on the legs are of a dirty brown spotted with white.

The *Erne* is of a dirty iron colour above, and iron colour mixed with black below; the head and neck are ash-colour mixed with chesnut; the points of the wings blackish, the tail white, and the legs naked.

The *Jean le Blanc* is of a brownish grey above, and white, spotted with tawny brown below; the feathers on the outside, and at the extremity of the tail, are brown; on the inside they are white streaked with brown: the legs are naked.

The *Brasilian Eagle* is of a deep brown, with ash-colour mixed in the wings; the tail white, and the legs naked.

The *Oroonoko Eagle* has a topping, and is of a deep brown above; and white, spotted with black, below; the upper part of the neck is yellow; the feathers of the tail are brown, with white circles; the feathers of the legs are white, spotted with black.

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Pondicherry Eagle



King of the Vultures



The *Eagle of Pondicherry* is of a chefnut colour, except that the six outward tail feathers are half black.

THE CONDOR, OR CONDOUR OF AMERICA.

NATURALISTS are in doubt whether to refer the condour of America to the eagle tribe, or to that of the vulture. Its great strength, force, and vivacity, might plead for its place among the former; but the baldness of its head and neck might be thought to degrade it among the latter. It is evident, however, that if size and strength, combined with rapidity of flight and rapacity, deserve pre-eminence, no bird can be placed in competition with it. The condour possesses, in an higher degree than the eagle, all the qualities that render it formidable, not only to the feathered kind, but to beasts, and even to mankind.

The goodness of the Creator is evidently discerned in that plentiful provision, which he hath made, of creatures beneficial to mankind: nor are the footsteps of his gracious wisdom less manifest, in the care which he hath

hath taken to prevent the over-spreading increase of such as are pernicious and destructive. A more remarkable proof of which we cannot have, than in the wonderful bird before us : which, happily for mankind, is rare, and seldom found : for was the increase of the species large, it would spread universal havoc and devastation.

The condor or condour is a native of South-America. Captain Strong, as Sir Hans Sloane informs us, in the Philosophical Transactions, N^o 208, shot one of them on the coast of Chili, not far from Mocha, an island in the South-Sea. It was shot, sitting on a cliff, by the sea side ; and was sixteen feet from wing to wing extended. He gave Sir Hans one of the feathers, which is now in the British Museum, and is two feet four inches long ; the quill part five inches three quarters long, and one inch and a half about in the largest part. It weighed then, says he, three drams, seventeen grains and a half, and is of a dark brown colour.

To this account Sir Hans Sloane adds the testimony of Garcilasio de la Vega, who declares, "that several of the fowls have been killed by the Spaniards, and

measured from end to end of their wings extended, fifteen or sixteen feet. Nature, he observes, to temper and alay their fiercenes, hath denied them the talons, which are given to the eagle; their feet being tipped with claws like a hen: however their beak is strong enough to tear off the hide, and rip up the bowels of an ox! Two of them will attempt a cow or a bull, and will devour him: and it hath often happened that one of them hath assaulted boys of ten or twelve years of age; and hath eaten them." The Spanish inhabitants, on the coast of Chili, told Capt. Strong, that they were ever in dread, lest this rapacious bird should prey upon their children. And it is said, that the Americans hold out to it, as a lure, the figure of a child, made of a very glutinous clay; upon which it descends with excessive rapidity, and strikes its pounces into it so deep, that it cannot, after that, get away. Mr. Condamine has frequently seen them in several parts of the mountains of Quito and Peru, and has observed them hovering over a flock of sheep; and he thinks, that they would have attempted to carry one off, if it had not been for the shepherd.

herd. The Indians assert that they will carry off a deer, or a young calf in their talons, as eagles would an hare or a rabbit.

Garcilasio further adds, that their colour is a mixture of black and white, and the tail is like a magpie's: they have on the fore-part of their heads a comb, not pointed or toothed like that of a cock; but rather even, in the form of a razor. When they come to alight from the air, they make such a prodigious noise with their wings, as is enough to astonish or make a man deaf. Labat acquaints us, that those who have seen this animal, declare that the body is as large as that of a sheep, and that the flesh is tough, and as disagreeable as carrion. It never is seen in forests, on account of the extreme length of its wings, because it would not have room to fly: but it frequents the sea shores, and the banks of rivers, where it is likely to meet with prey.

What a blessing it is to mankind, that there are but few (enough to keep up the species, and not overcharge the world) of this monster in the feathered creation! and into what can we resolve this rarity of a species so pernicious,

but into the wise and over-ruling care of that adorable Providence ; which we are assured, by the mouth of unerring truth, extendeth his concern, not only to man, but to the meanest of the feathered tribe ; “ Not a sparrow falleth to the ground without our heavenly Father !” they who, as weakly as wickedly, endeavour to attribute all things to chance and second causes, would do well to inform us, how it comes to pass, that the vast and destructive condor is so seldom found, is so slow in increase ; while the fowls of an useful and benevolent sort, multiply so amazingly ; and so plentifully contribute to our support and delight ? Why should the hen or the turkey, the duck or the partridge, lead forth such a numerous brood ; while the lone terror of Peru sits desolate, with its single offspring, on the top of the rocks ?

The balance of animals, preserved in the creation, is a manifest token of the divine Providence. “ The whole surface of our globe, says an ingenious naturalist, can afford room and support only to such a number of all sorts of creatures : and if by their doubling, trebling, or any other multiplication

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of their kind, they should increase to double or treble that number, they must starve or devour one another. The keeping therefore the balance even is manifestly a work of the divine Wisdom and Providence. To which end the great Author of Being hath determined the life of all creatures to such a length; and their increase to such a number, proportional to their use in the world. The life of some creatures is long, and their increase but small; and by that means they do not overstock the world. And the same benefit is effected where the increase is great, by the brevity of such creatures lives, by their great use, and the frequent occasions there are of them for food to man or other animals. It is a very remarkable act of the divine Providence, that useful creatures are produced in great plenty, and others in less. The prodigious and frequent increase of insects, both in and out of the waters for the supply of the fish, birds, &c. may exemplify this one; and it is observable in the other, that creatures, less useful, or by their voracity pernicious, have commonly fewer young, or seldom bring forth, of which many instances may be given.

is the voracious beasts and animals ; but the condor of Peru is a particular and very sufficient instance. ♫

P. Feuillée, the only traveller who has accurately described this bird, gives us the following circumstantial account. " In the valley of Ilo in Peru, I discovered a condor, perched on a high rock before me : I approached within gun-shot and fired ; but as my piece w: s only charged with swan-shot, the lead was not able sufficiently to pierce the bird's feathers. I perceived, however, by its manner of flying, that it was wounded ; and it was with a great deal of difficulty that it flew to another rock, about five hundred yards distant on the sea shore. I therefore charged again with ball, and hit the bird under the throat, which made it mine. I accordingly ran up to seize it ; but even in death it was terrible, and defended itself upon its back, with its claws extended against me, so that I scarce knew how to lay hold of it. Had it not been mortally wounded, I should have found it no easy matter to take it ; but I at last dragged it down the rock, and, with the assistance of one of the

seamen, I carried it to my tent to make a coloured drawing.

" The wings of this bird, which I measured very exactly, were twelve feet three inches (English) from tip to tip. The great feathers, which were of a beautiful shining black, were two feet four inches long. The thickness of the beak was proportionable to the rest of the body, the length about four inches; the point hooked downwards, and was white at its extremity, and the other part was of a jet black. A short down, of a brown colour, covered the head; the eyes were black, and surrounded with a circle of reddish brown. The feathers on the breast, neck, and wings, were of a light brown; those on the back were rather darker. Its thighs were covered with brown feathers to the knee. The thigh bone was ten inches long; the leg five inches: the toes were three before, and one behind: that behind was an inch and an half; and the claw with which it was armed was black, and three quarters of an inch long; the other claws were in the same proportion; and the leg was covered with black scales.

is also the toes ; but in these the scales were larger.

“ These birds usually keep in the mountains, where they find their prey : they never descend to the sea-shore, but in the rainy season ; for, as they are very sensible of cold, they go there for greater warmth. Though these mountains are situated in the Torrid Zone, the cold is often very severe : for a great part of the year they are covered with snow, but particularly in winter.

“ The little nourishment which these birds find on the sea-coast, except when the tempest drives in some great fish, obliges the condor to continue here but a short time. They usually come to the coast at the approach of evening ; stay there all night, and fly back in the morning.”

Some are of opinion that the condor is not confined to America only : the great bird called the rock, described by Arabian writers, and so much exaggerated in fable, is supposed to be a species of the condor. The great bird of Tarnassar in the East-Indies, and the vulture of Senegal, which carries off children, are probably no other than the bird we have been describing.

ing. However this be, we are not to regret that it is hardly ever seen in Europe, as it appears to be one of the most formidable enemies of mankind. They chiefly inhabit the deserts of Pachomac, where men seldom venture to travel. Those wild regions are alone sufficient to inspire a secret horror ; the forests are vocal with the roaring of wild beasts, the hissing of serpents, and the mountains are rendered terrible by the condor.

May we not remark the goodness of Providence, in protecting the human species no less from those rapacious sons of ambition, which are so rarely produced ; and which, when they appear, are a kind of condor, pernicious and destructive to mankind ? An Alexander or a Cæsar, spreading death and devastation, are comets which blaze seldom in the world ; happy for the world, that they do so ! Too little acquainted with peace as it is, at the best, madmen of that sort would render it an universal field of blood. Miserable princes, though your pride be absurdly flattered on earth ; how dire an account must you have hereafter to give, whose lust of sway, and

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thirst of power, have unsheathed the bloody sword of war; let loose the agents of ruin and havoc; and rendered you the instruments of universal misery, and the general curse of your suffering fellow-creatures.

Happy Britain, as in a thousand other particulars, so in the peculiar favour of heaven on thy climate; which no pernicious or rapacious animals inhabit; through which never stalks, furious with hunger, the devouring tyger; over which never hangs, threatening devastation, the voracious and unwieldy condor! Happy Britain, whose fields smile with plenty; and over whose plains roves fair Freedom, unmolested, and blest to her wish; while, studious to protect thee, a gracious monarch sways thy scepter, who never draws the sword, but in defence of freedom, and his people; who is rejoiced to diffuse blessings around him; who stands the illustrious contrast “ of Macedonia’s madman and the Swede :” the beneficent dispenser of good, and the universal delight of his people!

THE

THE VULTURE.

IN the description of birds, the first rank has been usually given to the eagle; not because it is stronger or larger than the vulture, but because it is more generous and bold. The eagle, unless pressed by famine, will not accept of carrion; nor will he ever devour what he has not earned by his own pursuit. The vulture, on the contrary, is indelicately voracious, and seldom attacks living animals, when it can be supplied with the dead. Putrefaction and stench, instead of deterring, only serve to allure him. The vulture among birds is what the jackall and hyæna are among quadrupeds, who prey upon carcasses, and disinter the dead.

Vultures are easily distinguished from all those of the eagle kind, by the nakedness of their heads and necks, which have no other covering, than a very slight down or a few scattered hairs. Their eyes are more prominent; those of the eagle being buried more in the socket. Their claws are also shorter and less hooked. They are different from

from all other birds of prey, in having the inside of the wing covered with a thick down. Their attitude is less upright than that of the eagle, and their flight more difficult and heavy.

They are also strongly marked by their nature, which, as we have already observed, is cruel, indolent, and unclean. Their sense of smelling is amazingly great, nature having supplied them with two large apertures or nostrils without, and an extensive olfactory membrane within. Their intestines are formed differently from those of the eagle kind ; for they partake more of the formation of such birds as live upon grain.

The vulture, which is common in many parts of Europe, and but too well known on the western continent, is an absolute stranger in England. In Arabia, Egypt, and many other kingdoms of Africa and Asia, vultures are very numerous. The down on the inside of their wings is converted into a very warm and comfortable kind of fur, and is frequently exposed to sale in the Asiatic markets.

In Egypt, the vulture is of singular service. In the neighbourhood of Grand

Grand Cairo, there are large flocks of them, which no person is permitted to destroy : they devour all the carrion and filth of that great city, which might otherwise tend to corrupt and putrefy the air. They accompany the wild dogs of that country, and frequently feed with them very deliberately upon a dead carcass. As both are extremely voracious, and both lean and bony to a very great degree, it is remarkable that this odd association produces no quarrels ; but these birds and quadrupeds seem to live amicably, and nothing but harmony subsists between them.

In America, where the hunters pursue beasts only for their skins, these birds are seen to attend. They keep hovering at a little distance ; and, when the beast is dead and abandoned, they call out to each other, run eagerly to the carcass, and, in a very short time, pick all the flesh from the bones.

Catesby informs us that they are attracted by carrion at a very great distance. "It is pleasant," says he, "to behold them when they are eating, and disputing for their prey. An eagle generally presides at their entertainments,

ments, and makes them all keep their distance till he has done. They then fall to with an exellent appetite: and their sence of smell is so exquisite, that the instant a carcass drops, we may see the vultures floating in the air from all quarters, and come sousing on their prey." Some have imagined that they eat nothing which has life; but this is only when they are unable to overcome their prey; for when they discover lambs, they shew no mercy; and serpents are their ordinary food.

In the Brasils, where vultures are found in great abundance, when they find a carcass which they have liberty to tear at their ease, they eat so voraciously that they are unable to fly. At all times, indeed, they are birds of a slow flight, and cannot raise themselves from the ground; but, when they are over-fed, they are entirely helpless: however, if they are purfued, they soon get rid of their burthen; for they can at any time vomit up what they have eaten, and then they fly off with greater facility.

It is entertaining to observe the hostilities between noxious animals. Of all creatures, the two most at enmity are

are the vulture of Brasil and the crocodile. The female of the latter, which in the rivers of that part of the world grows to the size of twenty-seven feet, lays from one to two hundred eggs in the sands, on the side of the river, where they are hatched by the heat of the climate. The crocodile takes every precaution to hide from all other animals the place where she deposes her burthen; but an assembly of vultures sit silent and unseen in the branches of some neighbouring forest, and observe the operations of the crocodile, with the pleasing expectations of succeeding plunder. They patiently wait till she has laid the whole number of her eggs, covered them in the sand, and retired to a convenient distance: then all together, they pour down upon the nest, uncover the eggs, and devour the whole brood without remorse.

Men, who have been pressed by hunger, have been tempted to taste the flesh of the vulture; but it is lean, stringy, nauseous, and unsavoury: it smells and tastes of the carrion by which it was nourished, and sends forth a stench that is insupportable. These birds usually lay two eggs at a time,

me, and produce but once a year. They make their nests in inaccessible cliffs, and in places so remote that they are seldom found. Those in Europe principally reside in the places where they breed, seldom venturing in the plains, except when the snow and ice, in their native retreats, have banished all living animals but themselves; then they brave the perils they must encounter in a more cultivated region.

In this tribe we may range the golden vulture, the ash-coloured vulture, and the brown vulture; which are all inhabitants of Europe; the spotted, and the black vulture of Egypt; the bearded vulture; the Brasilian vulture; and the king of the vultures in South-America. They are all equally indolent, lethargic, and rapacious, and perfectly agree in their nature.

THE GOLDEN VULTURE.

THE golden vulture, in many particulars, resembles the golden eagle, but is larger in every proportion. It is four feet and an half in length from the end of the beak to that of the tail, and to the end of the claws forty-five

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inches. The length of the upper part of the body is about seven inches, and the tail twenty-seven inches : the lower part of the neck, breast, and belly, are red. The feathers on the back are of a black colour ; and on the wings and tail of a yellowish brown. Others of the kind differ from this in colour and dimensions ; but they are all strongly marked by their naked heads, and a beak straight in the beginning, but hooked at the point.

THE KING OF THE VULTURES

THE king of the vultures is a native of America, and is somewhat larger than a Turkey-cock. It is chiefly remarkable for the odd formation of the skin of the head and neck, which is bare : the skin, which is of an orange colour, arises from the base of the bill, and extends on each side to the head, from whence it proceeds like an indented comb, and falls on either side according to the motion of the head. A scarlet-coloured skin surrounds the eyes, and the iris has the colour and lustre of pearl. The head and neck are destitute of feathers, having a flesh-coloured

coloured skin on the upper part, a fine
scarlet behind the head, and a duskier
coloured skin before: farther down be-
hind the head, arises a tuft of black
down, from whence issues a wrinkled
skin, which extends beneath the throat
on each side, which is of a brownish
colour, mixed with blue and reddish
behind: below, upon the naked part
of the neck, a collar is formed of soft
brownish feathers of a deep ash-colour,
which surround the neck, and cover
the breast before. The bird sometimes
withdraws its whole neck, and fre-
quently a part of its head, into this col-
lar, and appears to view as if it had
withdrawn the neck into the body. It
is sufficiently distinguished by these
marks from all others of the vulture
kind; and it cannot be denied that the
young of the vultures is the most beau-
tiful of all this deformed family; but
neither its habits nor instincts vary
from the rest of the cowardly, indolent,
and filthy tribe.

The vulture was consecrated to Mars and Juno; perhaps on account of the evils which these two deities did to mankind. It was also one of those birds, whose flight and cries were ob-

served with the most exactness in augury.

THE BEARDED VULTURE.

THE bearded vulture is about the size of an eagle; and from the tip of the bill to the end of the tail, measures about three feet four inches. The breadth, when the wings are extended, is seven feet six inches, and the primary quills are upwards of twenty-three inches in length. The bill is of a flesh-colour inclining to purple, darkest towards the point, and about four inches in length. From the root of the lower mandible hangs a remarkable tuft of black feathers; and the inside of the mouth is blue. The eyes are placed just above where the mouth extends, each eye being encircled with a brightish yellow. The sides and fore-part of the head are black; the nostrils are covered with stiff black feathers, and there is a blackish line from each corner of the mouth, which tends a little downwards in the form of whiskers. The rest of the head, and the whole of the neck are covered with white feathers, which are short on the head, but long, loose, and pointed.

pointed on the neck, like those of a cock. The upper side of the neck, the back, wings, and tail are of a dark brown colour, and the lesser covert feathers of the wings have dashes of a bright reddish brown along the shafts, but very narrow. The bottoms of all the feathers are white, and there is also a very thick, soft, white down all over the body under the feathers; the under side of the breast, belly, thighs, and coverts under the tail are white, tinctured with a reddish brown; and the legs are covered with short, white downy feathers. The feet are of a lead colour, the claws dusky, and the middle and exterior toes on each foot are joined by a strong skin. The vulture here described was brought from Santa Cruz, on the coast of Barbary.

THE BRASILIAN VULTURE.

THIS bird is also called the Mexican vulture, it being found in that country as well as in Brasil. Macrave says it is about the size of a kite; but, according to Mr. Ray, its bulk equal to that of a raven. It has a long tail, but the wings are of a moderate

derate length, and the whole plumage of the body is black. The head is small, and covered with a wrinkled skin of various colours ; being yellow on the left-side below the eye, and blue above, as well as on the top of the head. The remaining part is reddish. The beak is pretty long, very crooked, and covered half way with a saffron-coloured skin. In the middle of the upper part of the beak there is a wide nostril, with only one hole, and placed cross-wise. The extreme part of the beak is white, and without any skin, and the eyes resemble the colour of a ruby, with a round black pupil. Labat calls these birds a kind of Turkey cocks which feed wholly upon carrion, and never touch fruit, corn, or herbage.

The *brown*, the *spotted*, and the *black* vulture of Egypt agree with the general description of the vulture, and are distinguished only by their colour.

THE FALCON.

FALCONRY is now given over in this kingdom, though it was the principal amusement of our ancestors. A person of rank scarce ever appeared with

out his hawk in his hand ; which in old paintings is the criterion of nobility. Harold, who was afterwards king of England, when he went on a most important embassy into Normandy, is painted embarking with a bird on his fist, and a dog under his arm * ; and in an ancient picture of Henry VI. a nobleman is represented in the same manner. In those days it was thought sufficient for the sons of noblemen to wind the horn, and to carry their hawk with a grace ; study and learning being then confined to the children of meaner people. That hawking was the accomplishment of the times, appears by Spencer, who makes Sir Tristram boast, in book vi. canto 2. that

Ne is there hawke which mantleth her on pearch,
Whe her high towring, or accoastling low,
But I the measure of her flight doe search,
And all her pray, and all her diet know.

The expence which attended this sport was incredible : among the Welch princes, the king's falconer was the fourth officer in the state ; but, notwithstanding his honourable appointment,

* Monfaucon's Monumens de la Monarchie Françoise, i. 372.

he was permitted to take no more than three draughts of beer from his horn, lest he should get intoxicated and neglect his duty. In the reign of James the first, Sir Thomas Monson † gave a thousand pounds for a cast of hawks. It is not therefore surprizing that the laws were formerly so extremely rigorous to preserve a pleasure that was carried to such an extravagant pitch. By statute of king Edward III. it was made felony to steal a hawk; and to take its eggs, even in a persons own ground, was punishable with imprisonment for a year and a day, together with a fine at the king's pleasure. In the reign of Elizabeth, the imprisonment was reduced to three months; but the offender was to suffer imprisonment till he found security for his good behaviour for seven years. This diversion was in such high esteem, not only in England, but among the great all over Europe, that Frederic, one of the Emperors of Germany, thought it no indignity to write a treatise upon hawking. The art of gunning indeed was but little practised in the earlier times, therefore the hawk was valuable, as well for its affording diver-

† Sir Aut. Weldon's court of king James, 1615.

tion, as for its supplying the delicacies of the table, that could not otherwise be obtained.

The generous race of hawks which have been taken into the service of man, are distinguished from the rest by the peculiar length of their wings, which reach almost as low as the tail. In these, the first quill of the wing is almost as long as the second; it terminates in a point, which begins to diminish from about an inch of its extremity. The generous breed are thus distinguished from that of the baser race of kites, sparrow-hawks, and buzzards, whose tails are longer than their wings, and in which the first feather of the wing is rounded at the extremity. In the generous race the second feather of the wing is the longest, but among the kites, sparrow-hawks, and buzzards, the fourth feather of the wing is the longest.

The generous race are endowed with natural powers, of which the other kinds are destitute. From the length of their wings, they are swifter to pursue their game; from a confidence in their swiftness, they are bolder to attack it; and, from an innate generosity, they have an attachment to their feeder,

feeder, and consequently are more docile and tractable than birds of a baser kind.

The hawk may be taught to fly at any game whatsoever ; but falconers have generally confined their pursuit to such animals only as yield them profit in the capture, or pleasure in the pursuit. The hare, the partridge, and the quail, repay the trouble of taking them ; but the falcon's pursuit of the heron, the kite, or the woodlark, afford the most agreeable diversion ; when they see themselves threatened by the approach of the hawk, they immediately take to the skies, instead of flying directly forward, as most other birds do. They fly almost perpendicularly upward, while their eager pursuer endeavours to rise above them : they both gradually diminish from the gazing spectator below, till they are totally lost in the clouds ; but they descend shortly after, and are seen struggling together, the one using every effort of rapacious attack, and the other desperately defending itself. A period is presently put to the unequal combat ; the falcon comes off victorious, and the other, killed or disabled, becomes

becomes the prey of either the bird or the sportsman.

Other birds generally fly straight forward, by which the sportsman loses sight of the chace, and is in danger of losing his falcon also, therefore they are not much pursued. The pursuit of the lark by a couple of merlins is considered as excellent diversion: one of them soars above the lark, while the other, lying low for the best advantage, waits the success of its companion's labours; thus while the one stoops to strike its prey, the other seizes it as it descends.

The Norwegian breed of hawks was anciently in high esteem with our countrymen: they were thought bribes worthy a king. Jeffry Fitzpierre gave two good Norway hawks to king John to obtain for his friend the liberty of exporting one hundred weight of cheese; and John, the son of Ordgar, fined to Richard I. in one Norway hawk, to gain the royal interest in a certain affair *.

* Madox's *Antiq. Excheq.* 329, 332.

THE GYR FALCON.

THIS elegant species exceeds all other falcons in size, and approaches nearly to the magnitude of an eagle. The bill is yellow, and very much hooked ; the throat is of a pure white; and the whole plumage is of the same colour, except that it is marked with dusky lines, spots, or bars. On the head, breast, and belly, there are narrow dusky lines, thinly scattered and pointing downward : the feathers of the back and wings are marked with black spots in the shape of an heart, and the middle feathers of the tail with a few bars. The thighs are cloathed with long feathers of a pure white. The legs are yellow and feathered a little below the knees. This falcon is sometimes found entirely white : when falconry was in fashion, it was used for the noblest game, such as cranes and herons.

THE PEREGRINE FALCON.

THE size of this bird is equal to that of the moor-buzzard ; the bill is strong, short

Gyrfalcon



Peregrine Falcon





short, and very much hooked ; blue at the base, and black at the point. The feathers on the fore-head are whitish ; the crown of the head is black intermixed with blue, and the hind part of the neck black ; the back, scapulars, and coverts of the wings are elegantly barred with deep black and blue. The quill feathers are dusky, marked with elliptical white spots placed transverse ; the tail is barred with several strokes of dusky and blue : the throat is white ; the fore-parts of the neck and upper-part of the breast white, tinged with yellow. The rest of the breast, belly, and thighs, is white inclining to grey, and crossed with dusky strokes pointed in the middle. The feathers of the tail are of an equal length, beautifully barred with blue and black. This species was shot in Northamptonshire.

Signior Loranzi, in describing the male peregrine falcon, has made all his colours darker, and the head and upper part of the body almost black ; but the fore-part of the neck, the breast, and the belly, agree with the description above. It is probable, however, that the bird here described is the female peregrine falcon.

THE SACRE.

THIS is the largest of the falcon kind, except the gyr falcon. It has a large head, a short blue beak, and body longer in proportion than the rest of the tribe. The head is grey, the crown flattish, the eyes large and black, the nostrils small, the back and breast spotted with brown. The inside of the thighs are white, spotted with black. The feet and legs are generally blue, though sometimes they are whitish, spotted with yellow, and their backs are ash-coloured with a reddish cast.

THE MOUNTAIN FALCON.

THIS bird is about the size of the goshawk, but thicker in the body. It has a round head, except on the top where it is a little flattish, and covered with ash-coloured feathers mixed with black. The beak is strong, short, and crooked; at the upper-end of which are a great many fine slender feathers resembling hairs. The throat and part of the breast are spotted with ash-colour. The body is usually of a brown damp

pled colour, like rusty iron, but sometimes it is blackish, with small strokes of white. The thighs are cloathed with long black feathers, and the feet are nearly of the same colour. It is a very rapacious and untractable bird.

THE GREY FALCON.

THE grey falcon is about the size of a raven : the bill, which is of a blueish colour, is short, strong, and very hooked : the head is small and flat at the top, the fore-part of a deep brown, and the hind-part white. The sides of the head and throat are cream-coloured ; the belly white, with oblong black spots ; the hind part of the neck, and the back are of a deep grey. The wings are very long, and, when closed, reach beyond the tail. The first quill feathers are black, with a white tip, the others of a blueish grey, and their inner webs irregularly spotted with white. The tail is long, and resemble a wedge in shape : the two middle feathers are the longest, and plain, the rest are spotted : the legs are naked, long, and yellow.

THE FALCON GENTLE.

IT is necessary to be observed, that great caution ought to be used in describing the hawk kind, no birds being so liable to change their colours the two or three first years of their lives. Inattention to this has caused the number of hawks to be multiplied far beyond the reality: the marks to be attended to in order to form the characters of the species, are those on the quill feathers and the tail, which never change. Writers on falconry have given different names to the same kinds in different periods of their lives, which naturalists have adopted, and described as distinct kinds: even Mr. Ray has been so far misled as to copy them. Though the falcon, the falcon gentle, and the haggard, are made distinct species, they, in reality, form but one. This point is effectually cleared up by a French author, who wrote in the beginning of the last century: speaking of the falcon, he says, "S'il est pris en Juin, Juillet, et Aoust, vous le nommerez gentil: si en Septembre, Octobre,

Goshawk



Falcon Gentil





tobre, Novembre ou Decembre, vous le nommerez Pellerin ou Passager : s'il est pris en Janvier, Fevrier et Mars, il sera nommé Autenere ; et apres estre muë une fois et avoir changé son cerceau, non auparavant, vous le dires Hagar, mot Hebreu, qui signifie estranger *." That is, " If it is taken in June, July, or August, it is called The Gentle : if in September, Octobre, November, or December, it receives the appellation of the Pilgrim or Passengér : if it is taken in January, February, or March it is named Antenere : and, after having once molted, it is called Hagar, a Hebrew word which signifies stranger."

The falcon gentle is smaller than the peregrine falcon, with a smaller and a rounder head, and a shorter back, but exactly resembles it in shape. The head is flattish on the top. It has fine large black eyes, encircled with fine yellow rings. The upper-part, and the sides of the head, are of a dusky brown, spotted with a fine black. The neck is surrounded with a light yellow

* La Fauconnerie de Charles d'Arcussia seigneur d'Esperron, p. 14, 1697.

ring, not unlike a collar, and a black line on each side extends from the corner of the mouth to the middle of the throat. The breast, thighs, and belly, are of a fine yellow colour, with small black streaks pointing downwards. The wings, back, and upper-side of the tail are of a dusky black, and, when closed, reach almost to the end of the tail.

As it evidently appears, from the authority above quoted, supported by the opinion of Mr. Pennant, that the common falcon, the falcon gentle, and the haggard, are one and the same bird, we shall not trouble our readers with unnecessary repetitions, which would only tend to confuse them,

THE WHITE FALCON.

THIS bird is of a pure white all over the body, except a few faint yellowish spots, which cannot be distinguished without a close examination. The wings indeed are perfectly white, without any of those yellow spots. This colour is sufficient to distinguish it from all other birds of the same kind.

THE

THE TUNIS, OR BARBARY
FALCON.

THIS is a sprightly majestic bird, with a large black beak, and open yellow nostrils. The eyes are of a dark hazel-colour, encircled with yellow rings. The top of the head is of a pale ash-colour, beautifully spotted with black; and the feathers on the back, shoulders, and part of the wings, are nearly of the same colour, and equally ornamented with black spots. The breast, belly, and thighs are yellowish, inclining to white; the upper-part of the breast being a little shaded with blue. The wings are very long, reaching, when closed, almost to the end of the tail, which is of a blueish colour, with six or seven dusky coloured streaks running across it. Part of the thighs and the lower part of the belly, are marked with curious long red spots, resembling ermine.

THE LANNER.

THIS species breeds in Ireland: the bird here described was caught in a
decoy

decoy in Lincolnshire, pursuing some wild ducks under the nets. Mr. Pennant received the description of it from Taylor White, Esq. It is smaller than a buzzard; the crown of the head is of a brown and yellow clay colour: above each eye, to the hind part of the head, passes a broad white line; and beneath each, a black mark pointing down: the throat is white; the breast tinged with dull yellow, and marked with brown spots pointing downwards; and the thighs and vent are spotted in the same manner: the back and coverts of the wings are of a deep brown, but lighter towards the edges. The quill feathers are dusky; the inner webs marked with oval rust-coloured spots, and the tail is spotted like the wings. The legs, which are of a blueish cast, are short and strong, which according to Mr. Willoughby, are the characters of the *lanper*.

THE GOSHAWK.

THIS bird is larger than the common buzzard, and of a longer and more elegant form: the bill is blue towards the base, and black at the tip; the skin at the

the base of the bill is of a yellowish green: over each eye is a long white line, and on each side of the neck a bed of broken white. The head, the hind part of the neck, the back, and wings are of a deep brown colour: the breast and belly are white, beautifully marked with numerous transverse bars of black and white: the tail is long, and of a brownish ash-colour, marked with four or five dusky bars placed remote from each other. Mr. Willoughby distinguishes this species and the sparrow-hawk by the name of short-winged hawks, because their wings, when closed, do not reach so far as the end of the tail. The goshawk was much esteemed among falconers, and taught principally to pursue cranes, geese, pheasants, and partridges.

THE KITE.

THE kite may be distinguished from all the rest of this tribe, by his forked tail, and his slow floating motion, being almost for ever on the wing. He appears to rest himself upon the bosom of the air, and not to make the smallest effort in flying. Pliny supposes the inven-

invention of the rudder arose from the observation men made of the various motions of the tail, when the kite was steering through the air: it is certain indeed that the most useful arts were originally copied from animals, however we may have improved upon them. Among the Samoids, the Esquimaux, and those nations which are in a state of nature, their buildings are inferior to those of the beavers; such hardly human beings being only capable of making very imperfect copies of them.

The kite lives chiefly upon accidental carnage, as almost every bird in the air is able to escape him. He may therefore be considered as an insidious thief who only prowls about, and, when he perceives a small bird wounded, or a young chicken that has strayed too far from its mother, instantly seizes the hour of calamity, and, like a famished glutton, destroys it without mercy. His hunger indeed sometimes urges him to seeming acts of desperation. A kite is frequently seen flying round and round for some time to mark a clutch of chickens, and then on a sudden, to dart like lightning upon the little unresisting animal, and carry

it

it off, while the hen laments, and the boys cast stones in vain, to scare it from its plunder.

This bird usually breeds in large forests or woody mountainous countries: it lays two, and sometimes three eggs; which like those of all other birds of prey, are rounder and blunter at the smaller end than those of other birds. They are white, with dirty yellow spots. The motion of the kite in the air is so smooth and even as hardly to be perceptible; sometimes it will remain quite motionless for a considerable space of time, and, at others, glide through the sky without the least apparent action of its wings. It is observed by lord Bacon, that when kites fly high, it portends fine and dry weather. These have been reckoned birds of passage by some authors, but they certainly continue in England throughout the year.

The length of this species is twenty-seven inches, the breadth about five feet, and the weight forty-four ounces: the bill is two inches long, and very much hooked at the end: the skin at the base of the bill is yellow, and the

head

head and chin of a light grey; though sometimes white, marked with oblong streaks of black: the neck and breast are of a tawny red, but the middle of the feathers are black. The spots are less numerous on the belly and thighs, and under the tail they almost disappear. The back is brown, the first five quill feathers are black, and on the inner webs of the others are large blotches of white: the coverts of the wings are varied with tawny black and white; and the tail is of a tawny red; the outer feathers on each side being of a darker hue than the rest. The thighs are cloathed with very long feathers, and the legs are yellow and strong. These birds, however, sometimes differ in their colours, some having been seen that were entirely tawny.

THE COMMON BUZZARD.

OF all birds of the hawk kind, the kite is the best known, but the buzzard is the most common in England. It is a sluggish inactive bird, and sometimes remains whole days together perched upon the same bough. He may be considered

Buzzard



Moor Buzzard





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considered rather as an assassin than a pursuer, and lives more upon frogs, mice, and insects, which he can easily seize, than upon birds which he is obliged to follow. His summer food is obtained by robbing the nests of other birds, and sucking their eggs. He resembles the owl in his countenance more than any other rapacious bird of day. The stupidity of his disposition is pourtrayed in his figure; and so little is he capable of receiving instruction from man, that it is common to a proverb to give to a stupid person the name of buzzard.

This bird breeds in large woods, and usually builds on an old crow's nest, which it enlarges and lines with wool and other soft materials: it lays two or three eggs, which are sometimes entirely white, and sometimes spotted with yellow. If the hen buzzard should happen to be killed, the cock will hatch and bring up the young. The young accompany the old ones for some little time after they have quitted the nest, which is a remarkable circumstance; for all other birds of prey drive away their brood as soon as they can fly. This bird is subject to some variety in

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its colours; but usually the breast is of a yellowish white, spotted with oblong rust-coloured spots, pointing downwards: the back of the head and neck, and the coverts of the wings are of a deep brown, edged with a pale rust colour. The feathers on the shoulders and the sides of the back are brown, but white towards the roots; the middle of the back is covered only with a thick down. The ends of the quill feathers are dusky; their lower exterior sides ash-coloured, and their interior sides blotched with darker and lighter shades of the same. The tail is barred with ash-colour and black, the bar near the tip being black, and much broader than any of the rest: the tip itself is whitish.

The length of this species is about twenty-two inches, the breadth, with the wings extended, fifty-two, and the weight about thirty-two ounces.

This bird is subject to variety in its colours, some having been seen whose breasts and bellies were brown, and only marked over the craw with a large white crescent.

THE HONEY BUZZARD.

THE honey buzzard differs from the common kind, in the membrane at the base of the beak, called the cere, which is blackish, and the beak is of the same colour: the circle round the pupils of the eyes are of a fine yellow, the head is ash-coloured, the neck, back, scapulars, and covert feathers of the wings are of a deep brown; the breast and belly are white, marked with dusky spots pointing downwards: the tail is long and of a dullish brown, having three broad dusky bars; between each of which are two or three narrow ones of the same colour. The legs are short, strong, and thick, and the claws large and black. It is in length, from the beak to the end of the tail, about twenty-three inches, about twenty-two in breadth when the wings are extended, and weighs about fifteen ounces. This bird runs swiftly like a hen, and the female is larger than the male. The eggs are of an ash-colour with dark spots.

Mr. Willoughby informs us that the honey buzzard builds its nest with small twigs, and covers them with wool, and as he has found the combs of wasps in the nest, he gave this species the name of the honey buzzard; and he adds, that it feeds on the young of those insects, on frogs, lizards, &c.

THE TURKEY BUZZARD.

THIS bird is a little larger than a wild goose, and the feathers are a mixture of black, grey, and white, but the greater part are black; the bill is thick, crooked and pointed, and the claws thick and very short. Some imagine it to be a kind of eagle; and it is said that when an ox lies down in the field to repose, if these birds happen to see him, they fall immediately upon him and devour him: an hundred or more at a time are sometimes employed in this business. They have excellent eyes, and can discover their prey at a vast height.

THE MOOR BUZZARD.

THOUGH this bird is called in Latin *milvus*, or kite, it is more properly a buzzard, not having a forked tail, the distinguishing mark of the kite. It is called *le busard de marais* by Brisson. It frequents heaths, moors, and marshy places, and never soars like other hawks; but usually sits on the ground, or on small bushes. It makes its nest in the midst of a tuft of grafts or rushes, and lays two or three eggs. It is a fierce voracious creature, and makes great havock among rabbits, young wild ducks, and other water fowl. The usual length of this bird is twenty-one inches; the breadth, with the wings extended, four feet three inches; the tail is black, and the skin at the base of it yellow; the irides are also yellow. The whole bird, the head only excepted, is of a chocolate brown, tinged with rust colour. On the head is a large yellowish spot, and some have been seen whose heads were entirely white; others again have been found with a whitish spot on the coverts of the wings; but these are only to be considered as varieties. The legs

of this bird, which are long and slender, are covered with feathers a little below the knee ; and, in general, the make of the body is longer and less bulky than that of other birds of prey. The uniform colour of its plumage, and the great length and slenderness of its legs, distinguish it from all other hawks.

The hen-harrier, whose female is called the ring-tail, has its name from being an enemy to hens. It differs from others of this kind in having a white tail, except the middle feathers, which are entirely grey ; and in having upright feathers about the ears, surrounding the head like a crown. This bird is usually about twenty inches long, and three feet nine inches broad, when the wings are extended.

THE KESTRIL.

THIS bird is also called the stannel and the windhover. The male of this beautiful species is but about fourteen inches in length, two feet three inches in breadth, and six ounces and an half in weight : its colours immediately distinguish it from all other hawks. The crown of the head, and the greater part

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of the tail, are of a fine light grey, and on the lower part of the latter is a broad black bar; the tip is white; the back and coverts of the wings are red inclining to purple, embellished with elegant black spots. The interior sides of the quill feathers are dusky, deeply indented with white. The female weighs eleven ounces, the colours are not so bright as in those of the male; the breast is of a dirty white, and the middle of each feather has an oblong dusky streak, pointing downwards.

The kestril breeds in the hollows of trees, in the holes of high rocks, towers, and ruinous buildings. They lay four eggs at a time, which appear as if they had been besmeared over with red, and only here and there a spot of white is to be seen. Its food is field mice, small birds, and insects, which it will discover at a vast distance. This is the hawk so frequently seen in the air, fixed in one place, and fanning it with its wings; at which time it is watching for its prey. When falconry was in fashion in this island, the kestril was tamed, and trained for catching small birds and young partridges.

THE

THE HOBBY.

THE hobby was used in the humbler kind of falconry; particularly in what was called daring of larks. The lark is greatly terrified at the sight of a hobby, insomuch that, in order to avoid it, they will fly into a waggon, a coach, or even into a man's bosom as an asylum. Mr. Willoughby admits that the hobby breeds in England, but asserts it is a bird of passage: the length of the male is about one foot, the breadth two feet three inches, and the weight seven ounces; the crown of the head and back are of a deep blue, inclining to black: the hind part of the head is marked with two palish yellow spots, and each side with a large black one pointing downwards: the coverts of the wings are of the same colour with the back, except that they are slightly edged with rust colour: the interior webs of the secondary and quill feathers are varied with oval reddish spots. The two middle feathers of the tail are of a deep dove colour, and the rest are barred on their interior sides

sides with rust colour, and tipped with a dirty white. The spots on the breast of the female are of a brighter colour than on that of the male: the female is also much larger, and her legs have a tinge of green, though she resembles the former in other respects.

THE SPARROW-HAWK.

THE difference in size between the male and female sparrow-hawk, is very disproportionate; the former usually weighing about five ounces, the latter nine ounces: the length of the male is generally about twelve inches, and the breadth twenty-three; the length of the female fifteen inches, and the breadth twenty-six.

Like other birds of the hawk kind, these vary greatly in their colours; in some, the back, head, coverts of the wings, and tail, are of a deep bluish grey; in others of a deep brown, edged with a rusty red. The quill feathers are dusky, with black bars on their outer webs, and spotted with white on the lower part of their inner webs. On the tail, which is a deep ash-colour, there are fine broad black bars, and the tip

tip is white; the breast and belly are of a cream-colour, adorned with transverse waved bars, of a deep brown in some, and orange coloured in others. The skin at the base of the bill, the irides, and the legs are yellow. The colours of the female are different from those of the male: the head is of a deep brown, the back and coverts of the wings are brownish mixed with dove colour; the tail is of a brighter dove colour: the waved lines on the breast are more numerous than those on the breast of the male, and the breast is whiter.

This is the most pernicious hawk we have in England, and makes great depredations among pigeons and partridges. It builds in high rocks, large ruinous buildings, and hollow trees. It lays four eggs, which are white, encircled with red specks near the larger end. Mr. Willoughby places the sparrow-hawk among the short-winged hawks, or such whose wings will not reach the end of the tail when closed.

The sparrow-hawk was held in great veneration among the ancient Egyptians, because it represented their god Osiris: if any person had killed one of

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these birds, whether by accident or design, he was irremissibly punished with death. Among the Greeks, the sparrow-hawk was consecrated to Apollo, or the sun. It served for omens. It was also one of the symbols of Juno, because it had a fixed and piercing sight, like that goddess, when she was actuated by jealousy.

THE MERLIN.

THOUGH smaller than any of the hawk kind, and not much larger than a thrush, the merlin displays a degree of courage that renders him formidable to birds of six times his magnitude. He has often been known to kill a partridge or a quail at a single pounce from above. The bill is of a bluish lead colour, and round the neck, a little below the head, there is a ring of a yellowish white. The back, and upper part of the body are of a deep bluish ash-colour, adorned with streaks and spots of iron grey, and edged with the same: the quill feathers are almost black, marked with reddish spots: the under coverts of the wings are brown, embellished

embellished with round white spots. The tail, which is about five inches long, is crossed with alternate bars of dusky and reddish clay colour: the breast and belly are of a cream colour, with oblong brown spots pointing downwards. The legs are yellow, and the wings, when closed, reach within an inch and an half of the end of the tail. This and the sparrow-hawk were often trained for hawking; and this species, small as it is, was inferior to none in point of spirit. It was used principally for taking partridges, which it was remarkable for killing by a single stroke on the neck: the female, as in other birds of prey, is larger than the male. The merlin flies low, and is frequently seen about the roads, skimming from one side of the hedges to the other, in search of prey. This bird was known to our British ancestors by the name of *Llamysden*; it was used in hawking, and its nest was valued at twenty-four pence * a large sum of money in those early days!

* *Leges Wallicæ, 253. 25.*



THE G

*Eagle Owl**Butcher Bird*

THE GREATER BUTCHER BIRD.

THE greater butcher bird is about the size of a black-bird; its bill, which is black, is about an inch long, and crooked at the end. To this mark, together with its carnivorous appetites, it is indebted for its rank among the ravenous birds; but its slender legs and feet, and its toes, which are formed differently from the former, seem to place it in the shade between such birds as live wholly upon flesh, and such as live principally upon grain and insects. Its habits seem indeed to correspond perfectly with its conformation, as it will feed indiscriminately upon flesh and insects, and, in some measure, is found to partake of a double nature. Its appetite for the former, however, is most prevalent, for when it can obtain flesh, it always gives it the preference to insects. Thus circumstanced, the life of this bird, is a life of continual combat and opposition: its size being too insignificant to terrify some of the smaller birds of the forest, it frequently meets with those

those that are willing to try its strength, and it never declines the engagement.

It is astonishing to behold with what intrepidity this little creature will engage with the pie, the crow, and the kestril, all of which are considerably larger than itself, and sometimes prey upon flesh in the same manner. The butcher bird not only fights upon the defensive, but frequently begins the attack, and always with advantage; particularly when the male and female unite to protect their young, and drive away the more powerful birds of rapine. They do not, at that season, wait the approach of their invader; it is sufficient that they see him at a distance preparing for the assault. They immediately sally forth with loud cries, and attack with uncommon fury. They are generally victorious in these kind of disputes; but it sometimes happens that they fall to the ground with their adversary, and the combat ends with the destruction of both the assailant and the defender.

The most redoubtable birds of prey are upon friendly terms with the butcher-bird; the kite, the buzzard, and the crow, seem rather to fear

an endeavour to offend it. Nothing better displays the respect paid to the aim of courage, than to see this little bird, so contemptible in appearance, y in company with the lanner, the falcon, and all the tyrants of the air, fearless of their power or their resentment.

Small birds are its usual food; it seizes them by the throat, and strangles them in an instant; * the Germans therefore call this bird wurchangel, or the suffocating angel. When it has thus killed the bird or insect, it fixes them upon some neighbouring thorn, and then pulls them to pieces with its bill. When confined in a cage, they eat their food in much the same manner; sticking it against the wires before they attempt to devour it. Nature has not furnished it with strength sufficient to tear its prey to pieces with its feet, the hawks do; it is therefore obliged to have recourse to this expedient. During summer, such of the butcher birds as constantly reside here, remain among the mountainous parts of the country; but in winter they descend

* Edwards's *Gl.* iii. 233.

into the plains, and nearer human habitations. The nests of the larger kind are made on the highest trees, but those of the smaller are built in bushes in the fields and hedge-rows. They lay about six eggs, which are white, encircled at the larger end with a ring of brownish red. The outside of the nest is composed of white moss, interwoven with long grass, and the inside is well lined with wool. It is usually fixed among the foiking branches of the tree. When the young are first produced, the female feeds them with caterpillars and other insects, but in a short time afterwards, she accustoms them to flesh, which the male is very assiduous in procuring.

In their parental care they differ from most other birds of prey: instead of driving out their young from their nest to shift for themselves, they carefully attend them, and do not forsake them even when they are capable of providing for themselves; for the whole brood live in one family together. Each family lives apart, and usually consists of the male, female, and five or six young ones: peace and subordination is preserved among them, and

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they hunt together in concert. These birds are easily distinguishable at a distance, not only from their being in companies, but from their peculiar manner of flying, which is seldom direct or sideways, but generally moving up and down.

This bird weighs about three ounces, and is about ten inches in length and fourteen in breadth; its bill is one inch long, black, and hooked at the end: the nostrils are oval, covered with black bristles pointing downwards. The head is very large, and the muscles that move the bill are very thick and strong. The crown of the head, the back, and the coverts on the joints of the wings are ash-coloured, the rest of the coverts are black; the quill feathers are black, with a broad white bar in the middle, and all of them are tipped with white, except the four first feathers, and four of those next the body: the tail consists of twelve feathers, the longest of which is in the middle. Each side of the head is white, with a broad black stroke crossing from the bill to the hind part of the head: the throat, breast, and belly are of a

dirty white, and the legs are black. The female is of the same colour with the male, except on the breast and belly, which are marked with numerous semicircular lines.

THE RED BACKED BUTCHER BIRD.

THE male weighs about two ounces; the female two ounces and two drams. The length of the male is seven inches and an half, and the breadth eleven inches; the head and the lower part of the back are of a fine light grey, a broad black stroke runs across the eyes from the bill: the upper part of the back and the coverts of the wings are of a bright iron colour; the breast, belly, and sides, are of an elegant blossom colour; the two middle feathers of the tail are the longest, and entirely black. The lower part of the others are white. In the female, the stroke across the eyes is of a reddish brown; the head of a dull rust colour inclining to grey; the breast, belly, and sides of a cream colour, marked with semicircular dusky lines; the tail is of a deep brown, except that in both

he male and female, the exterior webs of the outward feathers on each side are white. These birds build their nests in low bushes, and lay about six eggs, which are white, encircled on the larger end with a ring of brownish red.

THE WOOD-CHAT.

THE size of this bird is about equal to the preceding: the bill is of the colour of horn; the feathers that surround the base are whitish, a black line crosses the eyes, and goes downward on each side of the neck: the head and the hind part of the neck are of a bright bay; the upper part of the back dusky; the coverts of the wings and tail dusky: the quill feathers are black, with a white spot on each towards the bottom; the throat, breast, and belly are of a cream colour; the two middle feathers of the tail are black; the exterior edges and the tips of the rest white. In the female, the upper part of the head, neck, and body are reddish, striated with brown; the lower parts of the body are of a cream colour, with rays of brown: the tail is reddish inclining to brown, and tipped with red.

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THE LEAST BUTCHER BIRD.

THIS species is less than either of the former; it is found near the marshes in London, and has been seen near Gloucester. This is also a bird of prey, though not much larger than a tit-mouse; an evident proof that an animal's courage or rapacity does not depend upon its size. Its form resembles that of a long-tailed tit-mouse. The bill is yellow, short, strong, and very convex: the head is of a fine grey; and beneath each eye is a long triangular tuft of black feathers; the throat is white, and the middle of the breast flesh-coloured; the sides and thighs of a pale orange; the hind part of the neck, and the back of an orange bay. The secondary feathers of the wings are black edged with orange: the quill feathers are dusky without, and white within: the lesser quill feathers being tipped with orange: the two middle feathers of the tail are the longest, the others shorten gradually on each side, the exterior on each side being of a deep orange colour. The legs are black. The female has not the black mark beneath

neath each eye, nor the fine flesh colour on the breast: the crown of the head is of a brownish rust colour spotted with black.

THE OWL.

HAVING described the rapacious animals of the day, we now come to a race equally cruel and rapacious, which add treachery to their savage disposition, and carry on their depredations in the night.

Owls, like other nocturnal robbers, surprise their prey at those hours of rest, when the tribes of nature are in the least expectation of an enemy. Thus, in nature's chain, no link appears to be broken; every place, every season, every hour of the day and night is bustling with life, and furnishing instances of industry, self-defence, and invasion.

Birds of the owl kind have a general mark by which they are distinguished from others; such is the formation of their eyes, that they see better in the dusk, than in open day-light. Thus, in the eyes of tigers and cats, which are formed for a life of nocturnal depredation,

predation, there is a quality in the retina that takes in the rays of light so copiously as to permit their seeing in almost total darkness ; so in these birds there is the same conformation of that organ ; and though they cannot see where there is an absolute exclusion of light, they are sufficiently quick-sighted, when every thing is imperceptible to us. Nature, in the eyes of all animals, has carefully shut out too much light, or admitted a sufficiency, by the contraction and dilatation of the pupil. In these birds the pupil is capable of shutting very close, or being greatly extended : by contracting it, the brighter light of the day, which would act too powerfully upon the sensibility of the retina, is excluded ; by dilating it, the bird takes in the fainter rays of the night, by which it is enabled to discover its prey, and seize it with greater facility in the dark.

But though birds of the owl kind are dazzled with resplendent light, yet they do not, as some have imagined, see best in the darkest nights. Their vision is best in the dusk of the evening, or the grey of the morning, when they are not incommoded with too much or too little

little light. It is then that they quit their solitary retreats to hunt or to surprise their prey, and their labours are, in general, attended with success. Almost all other birds are then asleep, or preparing for repose, and the most unguarded becomes the prey of these rapacious animals. But the nights when the moon shines are the times of their most successful plunder.

The faculty, however, of seeing in the night, or of being entirely dazzled by day, is not alike in every species of these nocturnal birds. Some see in the night better than others, and some are so little dazzled by day-light, that they perceive their enemies and avoid them. The common white or barn owl for instance, sees the smallest mouse that peeps from its hole, though the barn is shut at night, and the light in a manner totally excluded : on the contrary, the brown owl is often seen to prowl along the hedges by day, like the sparrow-hawk, and frequently with good success. In proportion as each of these animals best bears the day-light, he proceeds the earlier in the evening in pursuit of his prey. The great horned owl is the foremost in quit-

quitting his retreat, and penetrates the woods and thickets very soon in the evening. The horned owl, and the brown owl, are later in their excursions; but the barn owl seldom leaves his hiding place till midnight, seeming to prefer almost total obscurity to the dusk of the evening, or the grey of the morning.

As these birds are incapable of supporting the light of the day, or at least of seeing and readily avoiding their danger at that time, they remain concealed in some obscure retreat, adapted to their gloomy dispositions. Their usual places of abode are the cavern of a rock, the darkest part of a hollow tree, the battlements of a ruined and unfrequented castle, or some obscure hole in a farmer's barn or out-house.

At the approach of evening the owl falls forth, and skims rapidly up and down along the hedges. The barn-owl, indeed, as it lives chiefly upon mice, is contented to be more stationary: he places himself upon some shock of corn, or on the point of an old house, and watches in the dark with great vigilance and perseverance.

These birds have a most hideous note, which is often heard in the silence of

of midnight, and breaks the general pause with an horrid variation ; but though this note is different in all, it is alarming and disagreeable in each of them. Mankind are united in allowing the cry of the owl to be disagreeable ; and the screech-owl's voice was formerly considered among the people as a preface of some sad calamity that was speedily to happen.

But while they are in pursuit of their prey, this note is seldom heard ; that important business is always transacted in silence, as they by no means intend to disturb or forewarn those little animals they wish to surprize. When they have been successful they soon return to their solitude : when they find but little game, they continue upon the watch till longer ; and sometimes, hearkening to the voice of appetite rather than to that of prudence, they pursue so long that broad day breaks in upon them, and leaves them dazzled, bewildered, and at a distance from their retreat. Thus situated, they are obliged to take shelter in the first tree or hedge that presents itself, where they conceal themselves all day, till the returning darkness enables them to take a plan of

the country to discover where they are. But it frequently happens that, with all their precaution to conceal themselves, when thus surprized by day-light, they are discovered by other birds, from whom they must expect no mercy. The black bird, the thrush, the jay, the bunting, and the red-breast, all surround him, and employ their little arts of insult and abuse. The smallest and most contemptible of the owl's enemies are then the foremost to injure and torment him. They taunt him with their cries, flap him with their wings, and endeavour to appear courageous, as they are apprehensive of no danger: the wretched bird of night, not knowing where to attack, or where to fly, fits patiently and suffers all the indignities they offer: astonished and dizzy, he answers their insults by awkward and ridiculous gestures, by turning his head about, and rolling his eyes with an air of stupidity. The appearance of an owl by day-light is enough to set the whole grove into a kind of uproar; for the aversion all the small birds have to this animal, or the consciousness of their own security, makes them pursue him without ceasing, while,

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by their mutual cries, they encourage each other to assist in this laudable undertaking.

Sometimes indeed the little birds pursue their insults with the same imprudent zeal with which the owl himself has pursued his depredations: they hunt him till the evening returns, which restoring his faculties of fight, he makes his pursuers pay dear for the sport which he had furnished them. Whatever mischief one species of owl may do in the woods, the barn-owl makes a sufficient recompence by its activity in destroying mice; a single owl being supposed to be more serviceable than half a dozen cats in ridding the barn of its domestic vermin.

The owl, or bird of night, was consecrated to Minerva, as the symbol of vigilance, because it is awake during the night. It was reckoned a bird of ill-omen. In Virgil, a solitary owl, perched on the roof of the palace, affrights Dido with its dismal groans. Escalaphus, says Ovid, was changed into an owl, a bird which forebodes only misfortunes.

THE GREAT HORNED OWL.

THIS bird, at the first view, appears as large as an eagle, but, when more closely observed, he will be found much smaller. His head, body, wings, and tail, are shorter; his head larger and thicker. His horns are composed of feathers, which rise about two inches and an half high, and which he can erect or depress at pleasure: his eyes are large and transparent, encircled with an orange-coloured iris: his ears are large and deep: the bill is black; the breast and belly are of a dull yellow, marked with slender brown strokes pointing downwards: the thighs are of the same colour, but unspotted. The back, and coverts of the wings, are varied with deep brown and yellow: the quill feathers are of the same colour, with a broad bar of red near the ends of the exterior ones: the tail is marked with dusky and reddish bars, but appears ash-coloured beneath: the feet are feathered down to the claws.

The great horned owl usually breeds in the cavern of a rock, the hollow of a tree, or the turret of some ruined castle,

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castle. Its nest, which is almost three feet in diameter, is composed of sticks, bound together by the fibrous roots of trees, and lined with leaves of trees. It usually lays three eggs, which are as large as those of a hen, and of a colour somewhat resembling the bird itself. The young are very voracious, and the parents are assiduous and expert in providing food for them. This species is sometimes found in the north of England, in Cheshire, and in Wales.

THE LESSER HORNED OWL.

THE horns of this species are small, consisting only of a single feather each, which it can raise or depress at pleasure; and, in a dead bird, these horns are hardly to be discovered. This kind is less common than the former; but it is found in the mountainous woody parts of our island: both are solitary birds, and avoid inhabited places. These species might with propriety be called long-winged owls; their wings, when closed, reaching beyond the end of the tail.

The head of the lesser horned owl is small, resembling that of an hawk, the

bill is dusky : the circle of feathers which immediately surrounds the eyes is black ; the larger circle is white, terminated with tawny. The feathers on the head, back, and coverts of the wings are brown, edged with a dullish yellow : the breast and belly are of the same colour, with a few long narrow streaks of brown pointing downwards : the thighs, legs, and toes, are covered with yellow feathers ; the quill feathers are dusky, barred with red : the tail is of a deep brown, embellished with a yellow circle on each side of the shaft of each feather. The tip of the tail is white.

This owl never makes a nest for itself, but is satisfied with the old nest of some other bird, which it has often been obliged to abandon. It lays four or five eggs. At first the young are all white, but they change colour in about a fortnight.

There is still a smaller kind of the horned owl, which is not much larger than a thrush, and has remarkably short horns.

THE WHITE OWL.

THE white owl is almost domestic, inhabiting, the greater part of the year, barns, hay-lofts, and other out-houses, and is extremely useful in clearing those places of mice. It quits its perch about twilight, and takes a regular circuit round the fields, skimming along the ground in quest of field mice, and then returns to its usual residence. In the breeding season it takes to the woods. The elegant plumage of this bird sufficiently compensates for the uncouthness of its form : a circle of soft white feathers surround the eyes : the upper part of the body, the coverts and the secondary feathers of the wings are of a fine pale yellow ; with two grey and two white spots on each side of the shafts : the exterior fides of the quill feathers are yellow ; the interior white, with four black spots on each side : the lower fide of the body is entirely white ; the interior fides of the feathers of the tail are also white ; the exterior are marked with some obscure dusky bars : the legs are feathered to the feet, and the feet are covered with short hairs.

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The usual length of this bird is about fourteen inches, and the breadth three feet.

Owls, in general, are very shy of man, very indocile, and difficult to be tamed. The white owl, in particular, as Mr. Buffon asserts, cannot be taught to endure captivity ; but it is probable he means if it be taken when old. He informs us that they live ten or twelve days in the aviary where they are shut up ; but they refuse all kind of nourishment, and at last die of hunger. By day they remain motionless upon the floor of the aviary ; in the evening they mount on the highest perch, where they incessantly make a noise like a man snoring with his mouth open. " This seems," says Mr. Buffon, " designed as a call for their old companions without ; and, in fact, I have seen several others come to the call, and perch upon the roof of the aviary, where they made the same kind of hissing, and soon after permitted themselves to be taken in a net,"

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THE BROWN OWL.

THE head, wings, and back of this bird are of a deep brown, elegantly spotted with black: the coverts of the wings and the scapulars, are adorned with white spots: the exterior edges of the four first quill feathers are ferrated: the breast is of a very pale ash-colour, mixed with tawny, and marked with oblong jagged spots: the circle round the face is ash-coloured, spotted with brown. It inhabits the woods, where it remains the whole day. These owls are very clamorous in the night, and approach our dwellings. They frequently enter pigeon houses, where they make great havock. They breed in hollow trees, or ruinous buildings, and lay about four white eggs of an elliptic form.

THE LITTLE OWL.

THIS elegant species hardly exceeds a thrush in size, though the fullness of its plumage makes it appear larger. It has a light yellow ring round the eye, and the bill is of a paler colour: the feathers

feathers which encircle the face, are white, tipped with black. The head is brown, spotted with white: the back and coverts of the wings are of a deep olive brown, the latter being spotted with white: on the breast is a mixture of brown and white: the belly is white spotted with brown: the tail is of the same colour with the back, and each feather is barred with white. The legs and feet are covered with feathers down to the claws.

To these might be added the Screech-Owl, with blue eyes, and plumage of an iron grey: the Howlet, with dusky plumes and black eyes. And to this catalogue might also be added others of foreign denominations, which differ but little from our own; if we except the Harfang, or Great Hudson's-Bay owl, which is the largest of all the nocturnal tribe, and as white as the snows of the country where it is produced.

All this tribe of birds, however they may differ in their size and plumage, agree in the general characteristics of seeking their prey by night, and having their eyes formed for nocturnal vision. Their bodies are muscular and strong; their

their feet and claws admirably adapted to the tearing of their prey, and their stomachs for digesting it.

OF BIRDS OF THE POULTRY KIND.

BIRDS of the poultry kind are the most harmless and the most serviceable to man : he may compel the rapacious tribes to assist his pleasures in the field, or induce the warblers to delight him with their songs ; but he derives the most solid advantages from the poultry kind, which make a considerable addition to the necessaries of life, and furnish some of the greatest delicacies for the table.

Most of the domestic birds of the poultry kind, which we maintain in our yards, are of foreign extraction ; but there are others to be ranked in this class, that are still in a state of nature. The tame poultry which we have imported from distant climates have increased amazingly among us ; but those wild birds of the poultry kind, that have never yet been taken into keeping, have been diminished and destroyed.

Birds

Birds of the poultry kind are such as have white flesh, and, in proportion to their head and limbs, have bulky bodies. They have short strong bills for picking up grain; their wings are short and concave, and consequently they cannot fly far. They lay a great many eggs, and lead their young brood abroad in quest of food, the very day they are hatched; the young, from the instructions of the mother, being able instantly to help itself. They usually make their nests on the ground. The toes of all these are united by a membrane as far as the first articulation, after which they are divided. We may therefore rank under this class the common cock, the peacock, the turkey, the pintada or Guinea hen, the pheasant, the bustard, the grouse, the partridge, and the quail. All these birds bear a strong similitude to each other, being equally granivorous, fleshy, and delicate to the palate.

The rapacious class are formed by Nature for war, and she seems equally to have qualified these for peace, society, and repose. Their wings are ill-formed for wandering from one region to another, for they are but short; their

bill

bills are also short, and incapable of annoying their opposers: their legs indeed are strong, but their toes are calculated for scratching up their food, and not for holding or tearing it. These are sufficient indications of their inoffensive nature; while their fat and fleshy bodies render them unwieldy travellers, and incapable of straying far. We therefore find them chiefly in society, and though, like other animals, they sometimes have their disputes; yet, when they live in the same district, or are fed in the same yard, they are taught subordination; and in proportion as each is acquainted with his own strength, he never ventures in the combat a second time, where he knows he shall be vanquished.

All the birds of this kind seem to lead an indolent voluptuous life; as they are furnished with a strong stomach, usually called a gizzard, they are extremely voracious. When closely confined, and separated from all their former companions, they still enjoy the pleasure of eating, and grow fat and unwieldy in their prison. Many of the older species of birds, when in captivity, pine away, grow gloomy, and

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some even refuse all manner of sustenance; none except those of the poultry kind grow fat under confinement; they seem to lose all remembrance of their former liberty, being perfectly satisfied with indolence and plenty. They may be considered as sensual epicures, solely governed by their appetites, which destroy among them that connubial fidelity for which most other kinds are remarkable. Eagles and other ferocious birds are true and gentle to each other: when their connections are once formed, they end but with their lives; and in every exigence and every duty, the male and female lend faithful assistance to each other.

But it is very different with the poultry kind. Their courtship is extremely short, and their congress fortuitous. Heedless of his offspring, the male leaves all the care of providing for posterity to the female. Wild and irregular in his appeties, he ranges from one to another, and claims every female which he is strong enough to keep from his fellows. When opposed to birds of prey, he is daftardly and timorous, but extremely valiant among those of his own kind: to see a male of his own species is generally sufficient to produce

a combat. As he considers the farm-yard as his seraglio, every creature that pretends to be his rival, becomes his enemy. The female, equally a stranger to fidelity or attachment, yields to the most powerful. She seems an unconcerned spectator of the effects of their fury, and readily rewards the conqueror.

The female takes upon herself all the labour of hatching and rearing her young, and selects a place for hatching as remote as possible from the cock. She does not indeed bestow much trouble in making a nest, well knowing that her young ones are to forsake it the moment they part from the shell.

She does not require the assistance of the male in providing for her young; they have not food put into their mouths as in other classes of the feathered kind, but, following the parent, they peck their food wherever it is to be found. She conducts them to places where they are likely to have the greatest quantity of grain, and shews them, by her example, what is proper for them to eat. Though at other times voracious, she is then extremely moderate, and chiefly intent upon pointing

out the food to the young clutch, hardly taking any nourishment herself. Her parental care seems to triumph over every appetite; but that care decreases in proportion as her young ones become more able to provide for themselves; and, when they cease to require her aid, all her voracious habits return.

THE COCK AND HEN.

OF all other birds, the cock seems to have been first reclaimed from the forest, and taken to supply the accidental failure of the luxuries or necessities of life. Having been longest under the care of man, he exhibits the greatest number of varieties, not two birds of this species being seen to resemble each other exactly, in form and plumage. The tail, which is so great an ornament to the generality of these birds, is entirely wanting in others. The toes are usually four in animals of the poultry kind, but in one species of the cock, which abounds in the environs of Dorking in Surry, they amount to five. The feathers, which in most of them lie so sleek and in such beautiful order, are in a peculiar breed all inverted, and stand the wrong way. Nay, there is a species from Ja-

pan, which, instead of feathers, seem to be covered over with hair. These and many other varieties are to be found in this animal, which seem to be the marks this early prisoner bears of his long captivity.

When the cock was first made domestic in Europe, is not well ascertained; but it is generally supposed he came first into the western world, from Persia. The cock is called the Persian bird by Aristophanes, who tells us he enjoyed that kingdom before some of its earliest monarchs. In the most savage parts of Europe, this animal was so early known, that the cock was one of the forbidden foods among the ancient Britons. Indeed, the domestic fowl seems to have banished the idea of the wild one. Persia itself, from whom we first received it, seems no longer to know it in its natural form; and if it was not sometimes seen wild in the woods of India, as well as those of the islands of the Indian ocean, we perhaps might doubt, as we do with regard to the sheep, in what form it first existed in a state of nature. But we cannot entertain those doubts: the cock is seen in his ancient state of independence in the islands of Tinian,

in many other islands of the Indian ocean, and in the woods on the coasts of Malabar. In his wild state, his comb and wattles are yellow and purple, and his plumage black and yellow. There is another remarkable peculiarity in those of the Indian woods; their bones, which are white when boiled with us, are there as black as ebony. Whether this tincture proceeds from their food, as the bones of an animal are tinctured red by its feeding upon madder, or from what other cause; is a point not easily determined.

When they were first propagated in Europe, there were distinctions which now no longer subsist. Those with a reddish plumage were esteemed by the ancients as invaluable, and the white ones were considered as utterly unfit for domestic purposes. Aristotle seems to make his division of these birds from their culinary uses; the one sort he calls generous and noble, being remarkable for fecundity; the other ignoble and useless, from their sterility. These distinctions are very different from our modern notions of generosity in this animal; that which we call the game cock being much less fruitful than

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the ungenerous dunghill cock, which we look upon with contempt for his want of spirit, compared with the other animal. The Athenians, like us, had their cock-matches ; but it is probable they did not, like us, make choice of the most barren of the species for the purposes of combat.

It is certain, however, that no animal in the world is more courageous than the cock, when opposed to one of his own species ; and wherever refinement and polished manners have not taken place, cock-fighting is a principal diversion. In India, China, the Philipine islands, and all over the East, it is the sport and amusement even of princes. In England, it is declining daily, and in a short time it will probably become the pastime of only the lowest vulgar. It is the prevailing opinion, that we have a bolder and more valiant breed than is to be found elsewhere : but the truth is, they have cocks in China equal if not superior to ours in valour, and are also stronger and larger. It is surprising that those men who venture hundreds, nay even thousands upon the prowess of a single cock, have not taken every method to

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improve the breed, and particularly that of crossing the strain, as it is called, by a foreign mixture. But, as cock-fighting is a mean ungenerous amusement, we would not wish to promote it by our instructions.

The extraordinary courage in the cock, is supposed to proceed from his being the most salacious of all other birds, and the only animal whose spirits are not abated by indulgence. But he presently becomes old, and exhausted; and in three or four years absolutely unfit for the purposes of impregnation.

The hen seldom clutches a brood of chickens above once a season, though it sometimes happens that she produces two. A domestic hen will lay upwards of two hundred eggs a year, when properly supplied with food and water: she will continue to lay when she is not impregnated by the male, but eggs of this kind, though equally proper for food and all other domestic purposes, can never by hatching be brought to produce a living animal.

We may judge of the eggs of all other birds by those of the common hen,

in which the yolk and the white are readily distinguished ; but there is one kind of white which surrounds the yolk, and another which encompasses that : there are also ligaments which support the yolk, near the center of the egg, and two membranes, one surrounding the yolk, and the other the white ; there are also a third and fourth which encompass them, and a shell that defends the whole ; which serves to preserve the chicken from any accident till it is formed, and ready to come out of its prison. The cicatricula, or small white spot on the membrane which surrounds the yolk, is the real germ that contains the chicken in miniature.

The changes produced in this germ, from time to time, cannot possibly be discovered, on account of the fluids which surround it. The white, however, is thought to serve instead of milk to feed the young, and the yolk to be that part from whence the growth proceeds.

The hen, if left to herself, forms but a very indifferent nest, a hole scratched in the ground among a few bushes, is the only preparation she usually makes for the season of her patient expectation.

Nature,

Nature, almost exhausted by its own fecundity, informs her of the proper time for hatching, which she herself testifies by a clucking note, and by discontinuing to lay. Frugal housewives, who find the eggs more profitable than the chickens, often practise arts to protract this clucking season, and sometimes entirely remove it. Their methods are these: when the hen begins to cluck, they stint her in her provisions; and if that does not produce the desired effect, they plunge her into cold water. This effectually retards her hatching, but it often produces a cold, and the poor bird dies under the operation.

If the hen were permitted to pursue her own inclinations, she would seldom lay above twenty eggs in the same nest, without attempting to hatch them; but if her eggs are removed in proportion as she lays, she still continues to lay, vainly expecting to encrease the number. In the wild state she seldom produces more than fifteen eggs, but her provision is then obtained with more labour, and she is perhaps sensible of the difficulty of maintaining too numerous a family. When she begins to set, her patience

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and perseverance are incredible, she continues immovable for some days; and when forced from the nest by the calls of hunger, she quickly returns to her duty. During the time of her fitting she carefully turns her eggs, and often removes them to different situations; till at length, at the end of about three weeks, the young brood begin to give signs of their wishing to be released from their confinement; when by the repeated efforts of their bill they have broke themselves a passage thro' the shell, the hen still continues to fit till they are all excluded. The strongest chicken are generally the first advocates for liberty; the weak ones follow after; and some, which are still more feeble, even die in the shell. When the whole family are produced, she leads them forth to instruct them in the art of providing for themselves. Her affection and her pride seem then to alter her very nature, and render her an amiable bird. No longer cowardly or voracious, she boldly ventures to attack any creature that she supposes would do them any injury, and abstains from every kind of food that her young can swallow. When marching at the head

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of her little troop, she acts the commander, and has a variety of notes to summon them to their food, or to warn them of approaching danger.

Schemes have been contrived by which a hen that, in the ordinary way, produces but a dozen eggs in the year, may produce as many chickens as eggs, and consequently about two hundred. The contrivance I mean is the artificial method of hatching chickens in stoves, as practised at Grand Cairo, in Egypt; or in a chemical laboratory properly graduated, as has been effected by Mr. Reaumur. The Egyptians built spacious ovens of a form very different from ours, in which they placed a great number of eggs, and by means of a gentle fire, kept them in the same degree of heat as if they were under the hen. Here they remain till the usual time of hatching, and by this means they sometimes produce ten or twelve thousand chickens at a time. But, in our cold climate, the great difficulty is not in the hatching, that being easily performed, but in the clutching the chickens after they have been excluded. Reaumur has made use of what he calls a woollen hen; which was nothing more than

than putting the young ones in a warm basket, and placing over them a thick woollen canopy: but the whole apparatus was attended with so great an expence, as to render the scheme rather an object of curiosity than profit.

The cock is allowed to be a short-lived animal, but how long it would live if left to itself, has not been ascertained. As they are kept only for profit, and in a few years become almost useless, very few would, from mere motives of curiosity, make the tedious experiment of maintaining a proper number till they die. Androvandus is of opinion, that if they were permitted to live, they would attain the age of ten years; and it is probable that this may be the full extent.

The flesh of a cock contains a great deal of oil and volatile salt, but it is not so much esteemed as that of a hen, or rather of a pullet, because it is drier, has a less agreeable taste, and is harder of digestion. The flesh of a pullet also contains a great deal of oil and volatile salt, and is a most excellent aliment. It is pectoral, easy of digestion, and affords great nourishment. It agrees with all ages and constitutions; but is best

suited to those who are delicate, and lead sedentary lives; for labouring people require stronger, and more substantial food. Eggs are a common aliment, and are equally useful in health and sickness. They digest easily, are very nourishing, abate the acrimony of the fluids, appease coughs, and clear the voice. They are also good for the breath, and greatly exhilarate the spirits; but they should not be boiled till they are hard.

The flesh of a chicken has nearly the same properties as that of a pullet, but it is more delicate and juicy.

The countryman's farm or habitation cannot be said to be completely stored or stocked without fowl as well as beast, which yield a considerable advantage by their eggs, brood, bodies, and feathers. Any poor cottager that lives by the highway-side may keep them; they being able to shift for themselves the greatest part of the year, by their feeding on insects, corn, or any thing almost that is eatable by any other sort of animal; and therefore they are kept to great advantage at barn-doors, and other places, where corn or straw is scattered.

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Those hens that are the best breeders, and the best layers, are to be chosen; the oldest being always the best fitters, and the youngest the best layers; but no sort will be good for either, if they are kept too fat. The best age to set a hen for chickens, is from two years old to five; and the best month to set them in, is February, though any month between that and Michaelmas is good. Observe to let them have constantly meat and drink near them while they sit, that they may not stray from their eggs, and chill them.

If fowls are fed with buck or French wheat, or with hemp, canary, or millet feed, which is commonly sown in March, it is said they will lay more eggs than ordinary; and buck-wheat, either whole or ground, and made into paste, which is the best way, is a grain that will fatten fowls or hogs very speedily; but the common food to fat them with is barley-meal, wet with milk or water; but wheat-flour is better: yet if you intend to bring up chickens, give a barley-corn or two to each of them, as you take them out of the nest, and so continue to

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feed them until they are fit for fatting*.

The cock was sacred to Minerva, as the symbol of watchfulness, to denote that true wisdom never sleeps. He often accompanies Mercury, who passes for a vigilant God. Cocks were sacrificed to the Lares, because those animals are brought up in houses, whereof the Lares are the guardians.

THE BANTAM COCK AND HEN.

THE bantam cock is a small, but a very courageous animal, and will fight any thing that opposes him. He has a reddish bill, fine red eyes, and a curious comb on the crown of the head. His ears are covered with a tuft of white feathers, and his neck and back with long streaming feathers of orange colour mixed with yellow. The breast and the lower part of the belly are black. It has long stiff feathers on the thighs, reaching considerably below the knees, and the legs are covered with small feathers as far as the toes. The tail consists of stiff black feathers, a

* *Complete Farmer.*

mong which are two large ones hanging over the rest in the form of a sickle. It is now pretty common in England, though it takes its names from Bantam in the East-Indies, from whence it was originally brought.

The Bantam hen is small and beautiful ; the bill is yellowish, and it has a small white comb, with a few white hairs on the top of the head. The skin round the eyes is reddish and bare, and the ears are covered with a brown tuft of feathers : the rest of the body, and the wings and tail are yellow, mottled with dark brown. The thighs and legs are feathered almost down to the toes. The colours of the Bantam hen frequently vary.

THE HAMBURGH COCK.

THIS is a very stately fowl : his bill is thick at the base, but ends in a sharp point. His eyes are of a fine yellow, encircled with dark-coloured feathers, under which there is a tuft of black ones which covers the ears. It has a reddish comb, reaching about half way over the head, the hind part being covered with dark-coloured feathers, in-

clining to black. The throat and gills are of the same colour, with a mixture of orange coloured and red feathers, waving round the neck, which are black at the extremities. The breast and belly are of a dark colour, spotted with black: the thighs, and the lower part of the belly are of a shining velvet black. The upper part of the neck and back is of a darkish red, and the tail consists of red orange-coloured, and shining black feathers. The legs are of a lead-colour, except at the bottom of the feet, which are yellow.

THE PEACOCK.

THE peacock, say the Italians, has the plumage of an angel, the voice of a devil, and the guts of a thief. Indeed there is none of the feathered creation can vie with him for beauty, when he appears with his tail expanded; but the horrid scream of his voice lessens the pleasure we should otherwise receive in viewing him; and his insatiable gluttony renders him one of the most noxious domestics that man has taken under his protection.

India first gave us peacocks ; and we are assured that they are still found in vast flocks, in a wild state, in the islands of Ceylon and Java. So beautiful a bird could not be permitted to continue long at liberty in its distant retreat ; for so early as the days of Solomon, we find apes and peacocks among the articles imported in his Tharshish navies *. A monarch so conversant in every branch of natural history, who spoke of trees from the “ cedar of Lebanon, even unto the hyssop that springeth out of the wall : who spoke also of beasts and of fowl,” would certainly instruct his officers to collect every curiosity in the countries they visited ; which gave him a knowledge that distinguished him from all the princes of his time : Ælian relates that they were brought into Greece from some barbarous country, and were held in such high esteem among them that a male and female were valued at Athens at above thirty pounds of our money. When Alexander was in India, we are told he found vast numbers of wild peacocks on the banks

* Kings i. 10.

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of the Hyarotis, and was so struck with their beauty, as to order a severe punishment on any who should kill or disturb them. When this bird was first introduced among the Greeks, they were so struck with the beauty of it, that every person paid a stated price for seeing it ; and several people came from Lacedemon and Theffaly, purely to satisfy their curiosity.

Though the peacock was first introduced into the West, merely on account of its beauty, mankind were tempted, from its figure, to think of serving it up for a different entertainment, the elegance of the feathers in some measure stimulating the appetite. Hortensius, the orator, was the first who served them up at an entertainment at Rome, and they were afterwards considered as the first of viands, and one of the greatest ornaments of every feast. But their fame for delicacy did not long continue ; for in the times of Francis I. we find it was a custom to serve up peacocks to the tables of the great, not in order to be eaten, but only to be seen : their manner was to strip off the skin, and, after preparing the body with the warmest spices, they again covered

it up in its former skin, with all its plumage in full display.

The head and neck, beginning at the breast, are of a deep blue, and the head is small in proportion to the body ; on the crown of which is a tuft, consisting of fine green shafts of feathers, bearing a greater resemblance to the stalks of plants newly sprung up, than to feathers. The bill is whitish, and cloven pretty deep : the neck is long and slender ; the wings are black towards the back, and red towards the belly. The tail, when spread, appears to be double ; the lesser being of a dusky colour, and not standing up like the long one. The long feathers spring out of the rump, and the shorter seem calculated to support them. The long feathers of the tail are of a chesnut colour, embellished with most elegant lines, which shine with gold ; but the tips are of a dark green. The eyes of the feathers are party-coloured, of a deep green, shining like a chrysolite, and of a gold and sapphire colour. They consist of four circles, variously tinctured ; the first is golden, the second chesnut, the third green, and the fourth, or middle, blue. The legs are armed with spurs like the common

common cock, and the belly is of a blueish green. Peacocks delight in spreading their tails to display their beauty, and they are certainly most elegant birds.

The peacock, like other birds of the poultry kind, feeds principally on corn, and is particularly fond of barley. But, as it is a proud capricious bird, there is hardly any food that it will not sometimes covet. Insects and plants are often eagerly sought, even when it has a sufficiency of its natural food before it. In the indulgence of these pursuits, walls cannot easily confine it; the tops of houses it strips of their tiles or thatch, lays waste the labours of the gardener, roots up his choicest seeds, and nips his favourite flowers in the bud. The beauty of this bird is therefore but a poor compensation for the mischief it occasions, and many of the more homely looking fowls have deservedly the preference.

In this country the pea-hen seldom lays above five or six eggs before she fits. Aristotle describes her as laying twelve; and it is probable she may be thus prolific in the East-Indies, as they are very numerous in the forests where they

they breed naturally. These birds live about twenty years ; and they have not that beautiful variegated plumage that adorns the tail, till their third year.

Taverner informs us, that near the city of Baroch, in the kingdom of Cambaya, whole flocks of these birds are seen in the fields : that they are extremely shy ; run off swifter than the partridge, and hide themselves in thickets. They perch upon trees by night, at which time the fowler approaches them with a kind of banner, on either side of which a peacock is painted. At the top of this decoy a lighted torch is fixed, and the bird, when disturbed, flies to that which is painted, supposing it to be a real bird, and is thus caught in a noose provided for that purpose.

There are varieties of this bird, some being white, and others crested. That which is called the peacock of Thibet, is the most beautiful of the feathered creation, having in its plumage all the most vivid colours, disposed in a manner that it is impossible for art to imitate, and form a pleasing figure to delight the eye of the beholder.

The pea-hen has no great variety in its colours, the wings, back, belly, thighs, and feet, being all brown, inclining to ash-colour: the top of the head and tuft are of the same colour; except that on the top of the head a few greenish spots are dispersed. The irides are of a lead colour, and the chin entirely white. On the neck the feathers are green and undulated, but at the extremities near the breast they are white.

THE END OF VOL. V.





